University News

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K.K. BAJAJ

Autonomous Colleges
— Focus on Teachers

N. VENKATAIAH

Education for All by 2000 A.D.

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Editor :
SUTINDER SINGH

Autonomous Colleges
Focus on Teachers

K.K. Bajaj*

Higher education profile continues to be dominated by traditional interests and attitudes despite the efforts of a few farsighted educational planners and thinkers to give it a new orientation and direction relevant to social demand and global compatibility. As colleges offer diversity of approach in their academic packages, management patterns and vocational relevance, most of them continue to maintain strong affiliation links with universities, depending upon their territorial jurisdiction. Affiliation, though an inherited legacy to maintain academic linkages and leadership of the universities, has since lost its significance and relational impact in view of the numerous administrative problems, bureaucratic pulls and political positionings of the universities where affiliation is only a formality of sorts rather than an arrangement of academic requirements and relationship. At best it is a certification to draw UGC assistance rather than an exercise in accreditation of academic standards under the university. The affiliating system which differs from university to university depending upon its local compulsions read in its statutes, at best limits the initiative and innovation in pursuit of excellence at the micro level. To give a chance to the colleges which can strive for excellence on their own, New Policy of Education 1986 emphasised this educational reform as a planned intervention through the UGC, universities and the state governments. Under the scheme the college has to establish its own lead in the maintenance of academic standards through its own set of admission rules, curriculum, examination and evaluation schedule with appropriate strategies for independent functioning. There is creative freedom which permits area specific studies and combination of courses without any dependence on university prescribed procedures and syllabi. The college has to conduct itself in terms of its own collective wisdom and according to its own guidelines and programmes while leaving the parent university with the nominal role of general supervision and conferring of degrees. The links with the universities being so strong and tradition bound cannot be severed so soon while the scheme is an experiment in educational decentralisation. The social acceptability and credibility of courses conducted by such colleges are yet to gain ground parallel to the courses offered by the affiliated colleges under syllabi prescribed by them. So the interventionist role of the universities cannot be wished away that soon.

An autonomous college has to strive towards overall planned development while maintaining its functional independence. It has to be its own policy formulator and has to match its declared objectives with actual performance. It has to ensure coordination of teachers for a proactive role to bring about qualitative improvement through dedicated professionalism. This calls for orientation of teachers, redesigning negotiated courses, preparation of better learning material, workshops and seminars, examination reforms such as continuous internal assessment, improvement in infrastructural facilities besides better amenities and avenues for teachers and students. For all this, the UGC offers an assistance of rupees seven lacs per year to the institution. This assistance package has not tempted many to take up the challenge which the scheme otherwise entails. Only about a hundred colleges out of over eight thousand colleges have sought autonomous status. This situation calls into question the preamble, procedure and imbalances of the scheme besides the assistance packages. This is a disturbing report about the dismal performance of the entire scheme during the last over eight years. Analyses both scholarly and otherwise reflect this argument suggesting midcourse corrections and redefining of emphasis and action points. It is clear that in spite of the so called provisions and incentives there have not been many takers. The progress has been slow. Many state governments are not enthusiastic to abandon control over their best run colleges. Most of the universities are indifferent or at least do not encourage the scheme. The teachers are not prepared to accept the challenge of independent functioning with the additional hard work and accountability that it will mean for them. Besides this, the non-government managements are equally confused. Thus, the entire thinking linked to the implementation of the scheme is that of doubt and lack of clarity in its conceptual framework needed to make the scheme a success. At the managerial level it is even apprehended that the managements, in the wake of grant of autonomy will emerge stronger and autocratic and in the scheme of things teachers' participation will remain dubious and insignificant with no built-in guarantee to check malpractices by the managements. Even the chances of financial mismanagement may grow. At the academic level, the teachers are satisfied and complacent enough to follow the present set of prescribed syllabi which they like to teach year after year without any alterations and additional inputs. In the context of an overall lack of social and political discipline they are not prepared to work extra time beyond routine teaching and evaluation. The scheme definitely calls for a new work ethos. It requires an enlightened outlook for the present and a better vision for the future. The teachers have to measure themselves upto the new requirements and challenges right from the tailoring of courses to the evaluation of students in a more responsive and accountable manner. In doing so, they have to recharge themselves and get their credibility reestablished. The challenge is not free from hardships. In most of the colleges admissions at present remain almost unchecked with concessions being conceded to students every moment and examination of the universities even being uncertain and irregular. A new discipline both in admissions and examinations would require men of integrity, discipline and impartiality to run the system, of course with social safeguards. Any weak link in the chain brings bad name and disaster to the entire system. Introduction of new courses is always a challenge; combination of subjects is another difficulty. Both of these are doubling the strain on teachers with an ever increasing flow of students seeking admissions. All these situational dichotomies compound to increase the thrust of the new challenge that the teachers have to face and there are not many teachers who can accept these challenges.

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The relevance of the system to the students is measured only in the context of their placement and employability. When there are no visible employment avenues the total exercise of education at the tertiary level appears to be irrelevant or at best casual. Employability of students through autonomous colleges with experimental courses without the formal support of universities could be yet another problem of its own kind because of institutional reputation and rivalries in the academic world. Besides this, the students never feel comfortable and confident about their mobility from an autonomous college to an affiliated college and vice-versa. There is no mechanism to determine and establish equivalence of courses available in autonomous colleges, affiliated colleges and the constituent colleges of the universities. The apprehensions of the students, teachers and parents are singular and convincing. At least no guidelines of any mandatory nature have been enshrined in the scheme to allay their fears. Simultaneously students' participation in the curricular activities of the central bodies of the collegiate sector at the university level becomes difficult. At the university level the academic leadership having once been withdrawn the college has very weak and tenous links with the academic world or at best the guidance of the university teachers now available through Boards of Students, Academic Council and other statutory bodies, gets marginalized or at best is reluctantly offered. The university college interaction becomes more half-hearted than what it is now. At the financial level also the UGC assistance is a mere inaugural offer and is not a substantial contribution or incentive to encourage the colleges to experiment with the scheme and succeed particularly after five years when the UGC assistance would cease and the total financial liability will have to be taken over by the government or the non-government managements who would find it difficult even to sustain such programmes as get started initially with such a central doze of assistance. Without substantial financial inputs autonomy is a misnomer and cannot be an eventual success. Even the managements of well established colleges could find things to be difficult.

In spite of all these difficulties linked to several sensitive issues the scheme requires to be given a fair trial after the gaps are bridged and anomalies removed. Teachers, students, parents and the people at large are required to be educated about the merits of the scheme which decentralises administration and aims at academic growth, values, initiative and involvement of all concerned. The resource crunch should not stand in the way of its implementation otherwise any half-hearted acceptance of the scheme would mean yet another experiment without corresponding good results. It has to be taken with a positive attitude and with a renewed sense of responsibility in educational planning and implementation. Above all it is the teachers who have to be mentally tuned to accept this organizational and academic change as it entails extra efforts and social accountability. The success of any institution lies in the core of its faculty. There are no direct incentives for the teachers and instead the scheme calls upon them to offer extra inputs for its success on moral, social and professional grounds alone. As such it continues to be resisted or at best half-heartedly implemented. In order to make it a success the scheme has to be reviewed to the extent that the teachers are brought centre-stage with proper awareness, fresh confidence and appropriate incentives if as an institutional reform it is to be driven to any academic advantage and social relevance. Otherwise the entire exercise is going to be counter-productive.

At the UGC level the incentives for the teachers of such colleges should be specific. They should be treated as a separate category for preferential assistance both in the matter of their approach for assistance for new courses and in all matters of research, training and professional enhancement. They have to be helped in carrying out an awareness campaign about the merits of the scheme vis-a-vis their proposed academic packages linked to social needs and employability of students. There have to be separate orientation courses for the teachers of autonomous colleges as their approach, quality and delivery systems have to be vastly different from those of conventional colleges. In an autonomous college each teacher has to be engaged in pursuit of excellence for which he is responsible while in affiliated colleges the university prescribed courses are a collective enterprise which has an element of sharing of burden linked to examinations conducted by the parent university. All this makes a definite difference in attitudes and styles of teaching. The UGC has to devise ways and means to make its intervention in the scheme more catalytic to enhance the interest and role of teachers in its implementation. Special inputs are sought to make the scheme viable and competitive. Besides this, teacher exchange programmes for the autonomous colleges require to be taken up to create better avenues for nationwise exposure to the teachers so that they could profit from mutual interaction and learn from exchange of views on success and failure stories across the country. There has to be a national pool of resources for such colleges. The present arrangements of stray recognition and consideration in different states and in the UGC, leave them as individual institutions without a sense of getting into the national mainstream of educational reform. The half-hearted approach to the autonomous colleges leaves them without establishing their merit and with the progressive resource crunch the chances of consolidation even recede with passage of time.

So for the success of autonomous colleges, the teachers have to be given their place of importance with suitable support incentives and brought centre-stage. They have to be encouraged by the universities, governments, managements and above all the UGC. Each at his own place has to offer help to the teachers as they alone can make the scheme socially relevant and successful. They, of course, have to identify their role and discharge their duties with a change of heart, accept the challenge of extra work, accountability and come upto the expectations of the students and society. Their changed role performance would earn them praise only if their products are different from those produced by the conventional system of which they too have been a part and parcel for such a long time. In brief, the teachers are more important in the new scheme of things than anything else and attitudinal changes are called for at all levels for this. It has to be realised that unless teachers are ready for this in their perceptions, this system with whatever merits it may have, will not be acceptable, and wherever it has come to be adopted, this will receive their half-hearted support and after a few years will result into yet another educational failure at the tertiary level.

Recently yet another significant effort has been made by the UGC towards vocationalization at the first degree level. This is to enhance the employability of students as they come out of the colleges. The scheme without basically altering the pattern of degree courses envisages through vocational subject specific inputs added to degree courses to prepare the students for occupations better. It is of course neither technical education nor professional training as such but is definitely directed to improve the core content and skills level of students to improve their self confidence and employability as compared to routine graduates with conventional combination of subjects. The scheme has many innovative and application oriented areas to consolidate the gains of first degree for the students. But without going into its merits and demerits, it is a scheme that holds sufficient promise for improving students' competence in the job market and as such should be suitably addressed to autonomous colleges as an incentive as in the case of autonomous colleges the acceptance of the scheme is free from usual bureaucratic and university level handicaps and bottlenecks that can be experienced countrywide. Again the teachers of such colleges should be the first to be preferred for the introduction and success of such courses. They should be offered all the facilities to undertake this academic reform in the interest of their students and society as they alone can act upon the scheme so expeditiously.

So it can be seen that the scheme of autonomous colleges hinges round the will and participation of teachers who require to be motivated and sensitised for this great educational reform. Since this has not been gainfully done so far, it is time it is done now, if the scheme is desired to survive. Running an autonomous college is both challenging and problematic when it comes to measures of performance. Firstly, the concept has not been standardised as a system and as an integral part of tertiary education. Secondly, most of the universities have not come to terms with identifiable measures of performance in these as the colleges have not established their indisputable identity and independence, the universities still being asked to award degrees. Thirdly, the level of state support for continuing the scheme is at best not clear and firm. These require to be addressed at the earliest and need continued boldness to ensure their success. At least the bureaucratic tendencies to conform to the pre-autonomous state should not stand in the way of the programmes of such colleges. Another worry is the economic downturn which surely impacts all programmes and capability. So a movement requires to be created by the teachers with energy and eagerness to match this new challenge and change. Survival of the scheme is linked to achievements. This is a fresh opportunity to make tertiary education free from shackles of tradition and to make it socially relevant in this age of extraordinary expansion and competition. Without any conceptual difficulties, competence and understanding of teachers will alone make the system acceptable in the framework of future which definitely is not going to be either like the present or the past particularly in the context of more coherent alternative of Distance Education which is fast replacing conventional framework of collegiate education and which is going to outperform conventional education through technological revolution and its learner oriented approach going across regional barriers. So there has to be a shift in emphasis and orientation of institutions with a more forward looking independent approach at all levels in the UGC, universities and the state governments through continued support and better funding to be demonstrated through additional inputs and incentives for the teachers to provide the required leadership, quality and coordination to make the scheme a success.

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Education for All by 2000 A.D.

N. Venkataiah*

Global Realities of Illiteracy

An unpleasant global picture of illiteracy is noticed with the following realities:

(1) More than 100 million children including 60 million girls have no access at all to primary schooling.

(2) More than 960 million adults, two-thirds of whom are women, are illiterate. Functional illiteracy is a significant problem in all countries.

(3) More than one-third of the world's adults have no access to printed knowledge, new skills and technologies that could improve the quality of their lives.

(4) More than 100 million children and countless adults fail to complete basic education programmes.

Can we believe that the present civilized world that too at the closure of twentieth century is facing the gigantic problem of illiteracy? But, it is a reality to reckon with.

World Declaration on Education for All (EFA)

Article-1 of the World Declaration on Education for All, proclaimed by the World Conference on Education for All, held in March 1990 at Jomtien, Thailand states:

> Every person — child, youth and adult — shall be able to benefit from educational opportunities designed to meet their basic learning needs. These needs comprise both essential learning tools (such as literacy, oral expression, numeracy and problem solving) and the basic learning content (such as knowledge, skills, values and attitudes) required by human beings to be able to survive, to develop their full capacities, to live and work in dignity, to participate fully in development, to improve the quality of their lives, to make informed decisions and to continue learning.

The statement is laudable and has been made tangible by the goal that the World Conference has set for itself to provide EFA by 2000 A.D.

Education for All by 2000 A.D.

EFA by 2000 A.D means that education is to be brought within the reach of all people by 2000 A.D by providing access to education to all children upto 14 years of age and functional literacy to adults in the age group 15-35. These are the two major goals of Education for All. It is implied that through literacy for all, the goal of health for all and stabilisation of population could also be achieved. The word "Education" is preferred over literacy because Education is more comprehensive in its meaning whereas literacy includes reading, writing and numeracy skills only. Literacy cannot be education. But, certainly it is a gateway to education. Education for All literally embraces all age groups and all sections of the society and ensures minimum levels of learning. A system should prevail which offers divergent educational opportunities in order to materialise this goal.

Education for All — Indian Context

EFA is an emerging concern of developing countries. In the Indian context, EFA would imply (a) expansion of early childhood care and development, (b) universalisation of elementary education, (c) reduction in illiteracy, (d) creation of necessary structure for empowerment of women's equality, (e) provision for development of skills to all persons who are functionally literate and those who have received primary education through formal and non-formal channels, and (f) improving the content and process of education in relation to environment.

New Delhi Summit

Nine most populous countries of the world — China, India, Bangladesh, Brazil, Indonesia, Egypt, Nigeria, Mexico and Pakistan — participated in the New Delhi Summit on "Education for All" held in December 1993. According to Unesco estimates these nine countries have (1) seventy per cent of the world's population, (2) half of world's out of school children, and (3) two-thirds of world's illiterates. Seventy million children in these countries are still outside the ambit of primary education. India accounts for one-third of the world's unlettered and twenty per cent of out-of-school

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children. The summit held in Delhi was not only timely but also the resolutions of the summit were of great importance for making education available to all.

Political Commitment

The Prime Minister, Chairman of National Development Council (NDC), has categorically declared that literacy and primary education must become the most urgent and supreme concern of the country. Strong political commitment of the Prime Minister to achieve Education for All is quite evident from the following steps taken by him:

1. Encouragement to the NDC to constitute a literacy committee which took keen interest in discussing and adopting recommendations regarding the action to be taken systematically for "Education for All";
2. Reinforcement of India's resolve to eliminate illiteracy and forge ahead with programmes of universal primary education; and
3. Declaration of allocation of six per cent of the G.N.P to education in the Ninth plan, with its major portion allotted to primary education.

National Policy

The National Policy on Education (1986) of the Government of India emphasised universal enrolment and universal retention of children upto fourteen years of age and substantial improvement in the quality of education. The Revised National Policy on Education (1992) envisaged the launching of a National Mission for achieving the universalisation of elementary education. The Mission has the central objective of mobilising all the resources — human, financial and institutional — necessary for achieving the goal of universalisation of elementary education.

Let us observe the functioning of some important programmes conducted in this country giving access to education to every person.

National Literacy Mission (NLM)

Adult Literacy has been the basic preoccupation of the NLM since its inception in May, 1988. In fact, it has a target of making 80 million illiterates in the age group 15-35 functionally literate by 1995. For NLM, literacy is not merely a knowledge of the three R's — reading, writing and arithmetic: it is more than that. Literacy should enable the learner to achieve self-reliance and participation in the process of development for improving his/her economic status and general well-being.

The NLM has been trying to reach out the poor and down-trodden masses in rural areas, the oppressed and suppressed labouring classes, the tribals living in the remote hills and forests and spreading the message of literacy. All these people who had no access to education for generations are for the first time getting to know about the value of literacy and its benefits. With literacy they would be able to fight their battle against poverty with redoubled vigour. It is also true that poverty alleviation cannot succeed without literacy effort.

Total Literacy Campaign

The reaching out to the poor and illiterate masses in the country is one of the biggest events of this century. By August 1992, such endeavours had been mounted in 166 districts of the country which are covered by Total Literacy Campaigns under the auspices of the NLM. More and more districts are coming forward to join the literacy movement now sweeping the nation throughout its length to breadth. At long last people seem to have realised the need for literacy, the need to get their children admitted to schools, the need to progress and prosper in life.

We feel gratified that in the past few years the rate of literacy in India has been showing a rapid growth. The overall literacy rate in the country has risen to about fifty six per cent. Much of the credit for this increase goes to the Total Literacy Campaign conducted under the auspices of the National Literacy Mission. Planned, coordinated and concerted efforts are made by the campaigns to combat illiteracy. The type of mobilisation taking place under total literacy campaign districts all over the country today is something which could not be thought of both before and after independence. An important feature of this campaign is that sensitisation leads to motivation and motivation in its turn leads to mobilization.

Pride of place in most of the Total Literacy Campaign Messages have been given to women's issues centring around their liberation from the tentacles of an orthodox feudal society, right of women to information and employment, right to same wages for the same or similar nature of work, right of maternity benefit and all other legal privileges and rights, option for becoming a mother and refusal to undergo the trauma of motherhood, right of the girl child to enrol and retain herself in the formal school system etc. Women constitute about seventy per cent of the total number of learners and their participation in the entire teaching-learning process has been found to be far more impressive than that of men.

Acquisition of literacy would, in general, enable every learner or neo-literate to understand and internalise his/her strength and weaknesses vis-a-vis the strength and weaknesses of the adversary or the forces which have continued to remain hostile, grappling with these forces and eventually overcoming them with strength, courage and confidence.

The literacy movement which started in the seventh plan is still young and its impact on the neglected groups will perhaps be seen towards the end of the current plan. Some work will still have to be carried over into the Ninth plan. If the Total Literacy Campaign is fully supported by a strong movement for universal primary education, India may be in a position to join the ranks of fully literate countries by the year 2000 as expected, provided population growth is checked simultaneously and economic growth increases along side.

Total Literacy

Total literacy is a misnomer. It sounds as if every body in an area is literate. Though in the beginning, as in the case of Kerala, if in a total literacy campaign area, ninety per cent or more of the specified age group (15-35, 15-45 or 6-45) are declared neo-literate, that area was designated as totally literate. Now it is said that the Government of India has watered down this percentage and has been allowing any area having more than eighty per cent literacy to be declared totally literate.

Non-formal Education

For the sake of bringing into its fold the push-outs, pull-outs, left-outs and drop-outs in the age group of 6-14 years, non-formal education came into existence in this country in 1970s. Non-formal education is part-time primary education — a special scheme for the educationally backward states. Flexibility is the characteristic of non-formal education whereas rigidity is the characteristic of formal education. It is an alternative channel to the formal primary education. The educationally backward states accept the schemes as the Central Government gives 50 per cent of financial assistance for co-educational classes or boys' classes and 90 per cent for purely girls' classes. 2,38,000 NFE Centres are reported to be running in the country with an enrolment of 60,000 children, especially girls. The scheme is open to voluntary agencies and about 400 of them are conducting NFE centres.

Formal Elementary School System

At present, our widespread elementary school system serves more than 13.5 crores of children in the age group 6-14 through 7.5 lakh full-time schools. Nearly 95 per cent habitations contain a school and others have schools at a short distance. Even with this large provision of full-time schooling and large enrolments too, the literacy percentage of the population remains low. Serious and sincere efforts are being put forth for universal enrolment and retention of the children till they complete V standard. Operation Black-Board Scheme is introduced in schools to improve the academic standards.

Hurdles to Education for All

All said and done, there are a number of obstacles/hurdles in reaching the goal of Education for All. It is always good on the part of functionaries to be aware of such hurdles to smoothen the path of Education for All.

a) *Population Explosion*

One of the hurdles for "Education for All" is the numerical size of the potential clientele for education in the country. India is the second most populous country in the world and constitutes about 16 per cent of the world population. Recorded as 84.63 crores in 1991, the population figures in 1995 have risen to 91.42 crores. To accommodate the large number of children flowing into the system annually, more teachers, more books and slates, more school rooms have to be provided.

b) *Drop-outs*

Children drop-out fast from grade III onwards and among those who complete grade V, the generality reaches the literacy level of grade II leading to their relapse into illiteracy soon after.

c) *Enrolment and Retention of Girls*

The low enrolment of girls and their problems of retention in school long enough to achieve literacy is another hurdle in the path of EFA. Along with gender discrimination, difficulties of terrain, distant placement of schools, early marriages, social harassment and burden of work due to poverty are other main reasons for the poor participation of girls in basic education. Large scale illiteracy of women is, therefore, inevitable especially in the rural areas till a significant social change takes place.

d) *Problems of Diversity*

The poverty-levels of families, child labour, gender disparities, language problems, non availability or lack of infrastructure for educational access such as roads and transport, facilities like water supply and sanitation, community resources which can help education, or community life-styles that hinder education, are factors which invariably affect people's participation in educational development at the local level.

The cultural and linguistic diversity of India poses a tremendous challenge to the programmes of literacy propagation and furtherance of Education for All.

e) *Educational Deprivation of Tribal Children*

In the case of the tribal children, language and curricular difficulties are severe because the uniform curriculum and standard textbooks in the major language of the region are irrelevant for them. Although residential schools like Ashram schools have been established for tribal children, not many have taken advantage of these due to cultural disinclination, situational constraints and language handicaps.

Conclusion

It is only in the past ten years that there has been an observable social and official awakening which perceives that to promote Education for All is in the interest of all. The expertise required for the purpose is not now lacking. The country has also committed itself to provide Education for All.

Despite a few hurdles in the path of education for all, 'Education for All' should not remain a dream or myth or a slogan, but it should become a reality at the earliest at least by 2000 A.D.

There is three pronged attack on illiteracy. With the efforts of formal elementary schools, non-formal education centres and adult education centres especially the Total Literacy Campaigns the people — young and old, men and women — are liberated and empowered not merely by literacy and basic education, but by a clear realisation of their cultural and intellectual potential as Indians. For us, that is the true meaning of 'Education for All'.

The functionaries of Total Literacy Campaign strongly believe that eradication of illiteracy is possible, feasible and achievable. Literacy can act as an important change agent of society. The country with all its resources — financial, material and non-material — is well on its way to achieving the goal of EFA possibly by the year 2000 or around that time. It is the duty of every educated citizen to do the needful to achieve the ultimate goal.

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TO OUR READERS

Knowledgeable and perceptive as they are, our contributors must not necessarily be allowed to have the last word. It is for you, the readers, to join issues with them. Our columns are as much open to you as to our contributors. Your communications should, however, be brief and to the point.

Computerizing University Libraries

Amjad Ali*

It is said that a library can exist on its own but a university cannot exist without a library. A library is the backbone of any great educational and research organization wherefrom fresh ideas are provided. It is a treasure house of information not only confined to its storage and dissemination but also an effective agency for creation of new knowledge.

Our country is passing through a very crucial phase of economic transition. Every sphere of national life is being affected by the recent changes. Higher education is no exception. Universities are irked by the restrictions on expenditure imposed by the University Grants Commission. But there is no move to conduct productivity surveys. Proper orientation and placement of staff and the availability of latest information technology will reveal highly encouraging results and this is sure to lead to better productivity. Recently, a survey on use of computer in the libraries of higher education has been conducted by Pandey S K Sharma of the University Grants Commission. As per study, the time taken in processing 500 books manually and through computer was 1065 and 62 hours respectively. It is to be noted here that the time of 40 hours required for typewriting/data entry was common for both the systems. This shows that for the university libraries a computerized system is about 50 times cost effective compared to a non-computerized one.

Computerization of the university libraries is a must for many other reasons too. The cost of publications is escalating at an annual rate of 15% for the scientific and technical literature and somewhere between 10 to 15% in case of the social sciences and the humanities. Secondly, there is the information explosion. As a result, more and more literature is available for the academic institutions. It is very difficult and almost out of reach for the university libraries to update their collections in the present circumstances. Thanks to the power of information technology it is not only possible now to cope with this difficult situation but also offer still better services. In computerized libraries the collections can be utilized optimally.

The terms 'networking' and 'resource sharing' have been used so extensively that they have lost their currency but the universities in our country seem to be least affected. We are planning more for the retreival functions in the name of computerization leaving aside the first and the foremost work of data entry to make it available in the electronic form. After nearly a decade of inception of the INFLIBNET Project we are not even in a position of take off. In the age of information explosion a decade is a very long time that should have not been allowed to experiment with. Our university libraries must have a definite plan of computerization. For this ways may be different but the first step should be the initiation of data entry. It simply needs the computer hardware and the software.

It has been observed that even after procurement of hardware and software the work does not start for a long time. This is a very harmful tendency in automation since the expected life of a computer system is about five years. By the time computerization is achieved an entirely new system outdates the existing ones. Then, there arises the problem of maintaining such systems. Most of the maintenance agencies refuse to take annual contracts for the older systems. Alternately, it needs consultancy of high professionals to run the system which is almost out of reach for the libraries. The time of launching computerization should be fixed up in accordance with the expected availability of hardware, software and the data entry staff as most of the problems confront at the initial stage.

In the past, computerization meant involvement of professors, scientists, engineers etc. This tendency still prevails. As a result, many persons are required to coordinate the work. This naturally delays the process. The most unfortunate decision is to allow the technocrats to develop software and ignore the expertise of librarians. Where there is an active involvement of librarians, the rate of computerization is faster such as in case of the libraries of Planning Commission, Parliament House, Indian Institute of Public Administration etc. There is hardly any university in the country now which can claim such achievements in automation.

Our expectations from computerization are very high at the time of beginning. We usually think of

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adopting many additional services such as (a) facility to search national and international databases, (b) setting up of the electronic library of CD ROM databases, (c) design and development of Open Public Access Catalogue in machine readable form, and (d) setting up of Desk Top Publishing system. These expectations are hardly realised but the whole process of computerization is delayed because of it.

Computerization of new and smaller libraries is easier compared to the older and the larger ones. But most of the univarsity libraries have emerged from the smaller libraries of the past. They have inherited with them the traditional systems of their maintenance. Computerization is based on the modern and standardized systems which are rare in the older libraries. Their systems have to be standardized and modified in accordance with the necessity of automation. This is possible by conducting stock and system verification.

A separate cadre of systems librarians can be drawn from the hardcore of library profession just as the accounts cadre has emerged from the administration in the universities. The expertise gained by the library staff while working in the technical, acquisition and the stock verification sections can be put to better use in computerization of the university libraries.

In the past, the fear of machines for librarians and the high cost of computers restricted their application in libraries. The fear has been eliminated because of the availability of user friendly and menu driven packages specially developed for automation of libraries. The machines of enhanced quality are available now a days on comparatively lower costs. This has been possible with the advancement in electronics and specially in the microchip technology based on Very Large Scale Integration (VLSI).

The selection of hardware is made keeping in view the quantum of data to be processed and the services expected. A larger university library may have needed a super computer had the automation been planned a decade back. In the changed circumstance of today even a mainframe is regarded as more than sufficient for such a library. Pantium, a personal computer with 'GB memory' can accommodate the whole bibliographical details of an avarage university library. Its memory can be extended further if needed as applicable in most of the systems. Some peripheral devices can also be attached with Pantium to divide the additional load and to permit decentralization of functions.

The larger university library systems can be computerized systematically by computerizing all the libraries under the system one after the other. The first phase may cover the automation of the central libraries and the satellite libraries can be taken up thereafter. All these libraries can be connected with the help of a telecommunication link for the purpose of networking and resource sharing.

The office of the librarian should be the central nodal agency with the most powerful computer system. The databases developed anywhere in the libraries should be available on this system. The major divisions of the central library should be provided terminals or computers as per their needs. Each of the major satellite libraries can also be equipped with an independent system to cope with the load and also to meet future needs.

Software for a major library should be chosen with great care. Basically, there are two options for it. The software can be developed locally and it can also be procured from the market. Experiences show that the locally developed softwares generally fail after sometimes. This is particularly relevant in case of the university libraries. The main reason being that the software development needs high professional skills and continuous updation even after its application. Forerunners in the development of softwares for the major academic libraries are the Indian Institutes of Technology. But the packages developed by them so far have not been adopted successfully. Two separate packages for automation of the acquisition and serials control were developed at the Indian Institute of Technology, Kharagpur recently. But they failed after two years of application. Similarly, IIT Delhi has not yet come out with a suitable package for automation of their library although they are working on it for the last many years.

The market is full of the readily available packages specially designed for library automation. Some of them have already proved dependable after their application. LIBSYS and LIBRIS are the packages designed to suit the library needs in the Indian context. The provisions for inhouse as well as the retreival functions have been incorporated. Their vendors undertake warranty to train the operating staff and run the system for the desired periods. These softwares are menu driven and user friendly and need lesser computer skill compared with the CD/ISIS and many other packages. LIBSYS has been refined over the years. It is operational on DOS, ZENIX and UNIX environment.

There is a provision of convertibility in most of the packages. It means that the data entered into the system using one software can be made accessible for the other. Unesco has prescribed some basic entry elements for all the software developers in order to standardize formats and permit global resource sharing among the desired institutions. This format is called the Common Communication Format (CCF).

The accession information is the basis for automation. It is extracted from the documents as well as from all other possible sources at the time of procurement. Thus the maximum details gathered are recorded in a standardized format called the accession register. In a computerized system these details are entered once only, stored properly and manipulated in the desired sequences.

The current data can be entered straightaway from the accession records as a routine work. However, additional staff or private agencies can be engaged for entry of the retrospective data. The agencies undertaking data entry have quite varying rates for their work. Sometimes, they quote charges for data collection also. These charges differ from Re. 1 to Rs. 25/- per record which means the bibliographical details of one document. One document normally occupies 250 characters/bytes in the memory of computer. Now a days, a generally accepted rate of data entry in the academic institutions is Rs. 08/per hundred key depressions. Thus the bibliographical details of one document can be entered for Rs. 3/- approximately.

Computer has proved to be the most powerful tool for management of information. But in the Indian universities its potential has not been realised properly. The university libraries have to face the challenge of computer as the coming generations will depend more on it. Or, this gap in library profession will adversely affect the overall process of education.

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PRINCIPAL

Modernization of Physical Education and Sports in India

Devinder Kumar Kansal*

Introduction

In order the country enters the twenty first century with a progressive revolution in national health and sports excellence, it is imperative that the system of physical education and sports coaching as prevalent in the country is modified. Effective physical education and coaching in tune with the fast changing modern times is not only needed to uphold the national prestige in International Sports Competitions but also to bring about overall awareness of the uses of active life style and the importance of exercise and aerobic fitness among the masses.

Emphasis in the development of sports has largely been laid on the expansion and modernization of the material facilities with least attention to the corresponding modernization in the process of human resource development in the field of physical education and sports sciences.

Historical Perspective

Since independence, the very first commission appointed by Ministry of Education under the chairmanship of Dr. Radhakrishnan, had recommended that all students be required to take a thorough physical examination not only at the time of admission but also once every year. In 1959, Kunzru Committee had recommended a classwise programme of physical education and sports. Likewise Kothari Commission (1964) had recommended that physical education should be compulsory for all students and not for selected few. Again in 1980, the Union Ministry of Education prepared a policy paper (termed as "Approach Paper") recommending that health and physical education should be taught as one of the seven compulsory school subjects. So much so in 1982, the Government of India created a separate Ministry of Human Resource Development. The department of Sports and Youth Affairs of this ministry laid down four distinct resolutions (constituting the National Sports Policy, 1984) in both houses of Parliament. These resolutions were approved by both houses of Parliament in August, 1984. Further, the Government of India established the Sports Authority of India again in 1984, with a view to achieve best utilization of available resources for the promotion of sports in the country. This was followed by the preparation of a programme of action in August, 1992 in order to implement effectively the National Sports Policy - 1984.

The Dismal Performance

In spite of concerted efforts by the Government of India right from independence till date, the country has neither been able to safeguard the prestige of nation in international competitions nor has it been able to introduce physical education and sports as an effective compulsory activity in the daily school time table. A critical review of the situation reveals that the country's failure in sports as well as in the physical development of the youth is based on the fact that the nation has neither modernized the curriculum of physical education & sports coaching nor has it paid any attention to the current requirements of physical education teachers and qualified coaches in the country.

Needed Modernization

In order to achieve success in the implementation of various recommendations made from time to time there is an urgent need to focus attention on the following quality control and modernization issues:

Modernizing Educational Structure

The National Policy on Education had recommended a common 3 + 1 years teaching programme after 10 + 2 for producing school teachers. However, in physical education the teachers are being produced either through a three year B.P.E. degree or through a one year B.P.Ed/D.P.Ed. Course. Thus, the Teachers Course in physical education is incomplete either for one year's lesser training in the subject (in case of B.P.E.) or even three year's lesser training in physical education (in case of those following one year's B.P.Ed./D.P.Ed. Course). This has resulted in less competent teachers in physical education and sports.

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Surprisingly, till date the coaches in the country are being produced only through a ten month's regular coaching course run by National Institute of Sports. This qualification does not render the coaches eligible for appointment as secondary school teachers.

It is high time that the modern educational structure, that is, 10 + 2 + 3 + 1 is adopted uniformally for both physical education teachers as well as coaches. The central and state governments are required to recognize/recruit only those physical education teachers/coaches who have the modern qualifications as recommended by UGC in 1990. Existing qualifications — 3 year B.P.Es. and non-graduates of physical education should be immediately declared ineligible for recruitment as physical education teachers in order to officially recognize the UGC recommendations.

Modernizing Physical Education and Sports Curriculum

Although the basic aim of physical education and sports is to evaluate children in their performance in sports, physical fitness and nation building programmes, till date none of the courses of physical education, even at master's degree level, includes any practical training in the subjects of Exercise Physiology, Biomechanics, Sports Psychology, Sports Nutrition, Sports Medicine, Kinanthropometry, Body Composition etc.

In order to cope with the recent developments of the fast changing modern times, it is essential that all the courses in physical education and sports coaching are modernized so as to include atleast 25% examination marks allotted to laboratory and field practicals in the above mentioned subjects.

Modernizing the Concept of Infrastructure

The importance of development of infrastructure has been emphasised right from pre-independence period to date. All commissions as well as committees appointed in physical education and sports have stressed only the sports facilities, infrastructure requirements without appropriate emphasis on the requirement and production of physical education teachers and coaches. To quote two examples, One, the National Sports Policy (1984) did not even include the physical education teacher or the coach in any of its resolutions (all its resolutions stressed the importance of physical education and sports, playfields, indoor halls, swimming pools, nutrition, talent identification, sports school colleges, incentives to sportspersons, employment opportunities to sportspersons, more sports competitions, international exposure, appropriate sports goods, participation of non-government institutions in sports promotion, employment of mass media in sports promotion, substantial additional financial allocation and the review of progress of implementation of National Sports Policy every five years etc). Two, the National Policy on Education recommended that new schools should be established or recognized only if playgrounds are available with no reference to sports/physical education teachers appointment.

All this has created a great mess by laying more and more stress on sports promotion by making physical education an integral and compulsory part of school curriculum without laying down any obligations or guidelines for the required number of teachers and coaches for the said job. In order to achieve success, it is imperative that the concept of infrastructure is modernized so as to include the provision of production of appropriately qualified physical education teachers and coaches not only for the educational institutions, but also for sports complexes and sports clubs etc.

Uses of Modernization

Although the general usefulness of the modernization process of physical education and sports is evident in the foregoing aspects of the present write up, yet it may be pertinent to point out specifically the following main uses of recommended modernizations:

Improvements in NSTC, ABC and PDA

Once the qualified teachers and coaches with modern knowledge of practical methods to be used in sports talent selection are available, Sports Authority of India's promising schemes namely National Sports Talent Contest (NSTC), Army Boys Sports Companies (ABC) and Project Development Area (PDA) schemes for sports promotion will definitely achieve remarkable improvements.

Development of Resource Persons

It is the proper modernization of physical education & sports which may yield the specialized resource persons in various branches like Sports Psychology, Sports Biomechanics, Sports Physiology, Sports Kinanthropometry, Sports Management, Sports Journalism, Sports Medicine, Sports Sociology, Sports conditioning, Kinesiology, Physical Fitness, Team Games, Individual & Dual Games, Athletics, Gymnastics, Yoga, National Service Scheme, Sports and National Integration etc etc.

Development of Faculties of Physical Education and Sports Sciences

University Grants Commission in 1990 had recommended that each university should create a separate Faculty of Physical Education and Sports Sciences. However, till date no visible implementation of the UGC recommendation has been observed. This is because the step needs modernization of physical education and sports as a pre-requisite at the existing centres producing physical education teachers and coaches.

Implementation of National Sports Policy

As pointed out earlier, the single largest casualty in the non-implementation of National Sports Policy and failure in sports and physical fitness programmes, is the non-availability of required expertise in the form of human resources. Once the modernizations as suggested above are taken care of, the nation will not only be able to achieve practical success in implementing the recommendations of UGC and National Sports Policy, but will also shine at the International Sports Competitions.

Promotion of Research and Development

Quality control is a measure of effective progress in the modern times. It cannot be over-emphasized that modernization of physical education and sports will greatly result in the improvement and proper establishment of research and development scenario in this field so as to enable the country to keep pace with the future and enter the 21st century successfully.

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Gujarat — The Decisive Phase

Dr. Yoginder K. Alagh, Vice-Chancellor, Jawaharlal Nehru University, delivered the Convocation Address at the forty third convocation of the Maharaja Sayajirao University of Baroda. He said, "I believe that Gujarat is now coming closer to the tryst with its destiny and you are the generation which will decisively carve out its future. It has great economic and cultural strengths as also major problems which you must solve. The future is not a matter of astrological predictions. It is literally in your hands." Excerpts

The Delhi University Sociologist A.R. Shah has described the castes of Gujarat the Kanbis, the Thakores and Rawals, the Advisasis and of course the Patels, the Vanias, the Rajputs and the Brahmins — the Nagars and Anavils. Apart from his cultural strengths the Gujarati is a hardy farmer and a good artisan. But above all he is a great trader and businessman. He crossed the Aravallis and Narmada and conquered markets and invested in the national economy. He made his presence felt across the Seas in foreign lands.

I believe that Gujarat is now coming closer to the tryst with its destiny and you are the generation which will decisively carve out its future. It has great economic and cultural strengths — some of which I will describe — as also major problems which you must solve. The future is not a matter of astrological predictions. It is literally in your hands.

Gujarat is perhaps the first of the regional economies of India to have modernized itself in a substantive structural sense. Growth of industry, growth of cities and other indicators are always discussed in the context of modernization, but central to the process is the structure of work and livelihood. The economic history of the last two centuries shows that genuine structural change and modernization takes place when employment and work opportunities are created outside the agricultural sectors. These are the well known findings of economic historians like Colin Clark and Simon Kuznets on the economic transformation of USA, UK, Germany, Japan and took place more recently in the Pacific Rim countries. This process does not mean neglect of agriculture, but agricultural productivity growth releases surpluses for the faster expansion of the manufacturing sector and around it construction and other trading and service activities. The benefits of the process lead to change in the structure of work and employment with jobs expanding faster outside agriculture.

Careful work done by the State Planning Commission of Gujarat shows that the non-agricultural workers percentage in the total work force of Gujarat went up from a little more than a third (36.3%) in 1972/73 to more than a half (51.2%) in 1987/88 for the male labour force. Gujarat was the first state in India in which one out of two male workers is now employed outside agriculture. In 1987/88, Gujarat had also the highest percentage of male labour force in urban areas depending on the *manufacturing sector* in India. In India one out of four male workers in urban areas (26%) depended on manufacturing, in Gujarat one out of three (33.4). Thus, Gujarat had diversified itself since it was formed in 1960. Its work force had shifted from agriculture in rural areas and in urban areas one out of every three workers was in the manufacturing sector.

How has this change taken place? During the decade of the Eighties, value added in the manufacturing sector in Gujarat grew at around 9% compound per annum. Since output grows faster than value added, industrial production probably went up at around 12% compound per annum, which would make it comparable to the growth of countries like Taiwan, Singapore and the average of the Pacific Rim countries, although slightly lower than that of South Korea and the southern part of China. There has been a very rapid expansion of employment in services and construction around this faster growth of the manufacturing sector. The change in the structure of Gujarat's labour force compares with that in the Newly Industrializing Countries (NIC).

There is no question that the growth of manufacturing and of trade and service employment will continue at the same rate as in the past. In fact with a little prudence, the State's manufacturing growth rate can be at around 12% compound per annum, in value added or around 15% compound per annum, in gross output. This would make it one of the fastest growing industrial regions in the world. If we are sensible the youth of today would be at the heart of this power house of change.

The first issue is to accept that we are growing faster and that we will continue to grow faster. The "high growth response" has to become a part of our society and culture. We have to constantly plan to grow faster in a manner such that the entrepreneurial and cultural strengths of the region are nurtured in the process. This requires attention to strengthening and adapting ourselves and our institutions to the challenges facing the national and global markets and to take advantage of the opportunities for the future. An investment of more than Rs. 70,000 crores being put into Gujarat will materialise in the next phase.

Technology and modern institutions are not to be feared or scoffed at — but mastered and internalized. Education and skills will be the key. Computerization, modern communications, the new materials and biotechnology will be at the heart of the new developments. Gujarat's historical artisan and trading skills have to be buttressed with the advantages of newer forms of knowledge and problem solving. Fortunately, the nature of the technological revolution and globalization of markets is such that decentralized development integrating small producers and artisans is possible as a number of studies are now showing.

Even if past trends continue into the future, ten lakh non-agricultural jobs will be created in the next five years. In fact growth will now be faster and so more jobs can be created. The best social strategy for the State is to train the poor boys of today for the jobs of tomorrow. When the State Planning Commission of which I am the Vice-Chairman had argued this point around three years ago, there were many question marks. But in a recent review of the State Economy, conducted by the State Planning Commission, we find out that our estimate of 2.5 lakh jobs per year or ten lakhs for five years, was on the lower side because last year 2.7 lakh girls and boys had applied for admission to the Industrial Training Institutes, as compared to the current number of available seats of around 30,000. People are now willing to pay for technical skill and education. A proposal of my friend Prafull Anubhai to set up an Educational Financing Corporation for the expanding, self-financing education sector in technical areas and for developing artisan skills must be implemented as soon as possible. Those who cannot afford such education, must be given freeships and scholarships and loans, and loan freeships from such funds. Policies must change to allow the incentives available for industries but must also now be available for investment in education and training, particularly for technical and commercial jobs. More generally as citizens and in public groups we must take greater interest in educational matters and resist the narrow focus of vested and sectional interest. Democratization and efficient working of education is the key to Gujarat's prosperity.

More generally it has to be recognized that efficiency is very important in the next phase of Gujarat's development. Agro-based and widespread industrialization based on new technologies should become the basis of widespread growth, rather than only through large industrial projects which make impossible demands on scarce infrastructure and non-renewable resources. The agricultural planning strategy for the State has shown the way for development of each of its six agro-climatic regions. We have all the soil types of the country and the World — alluvial, clay, flevisols and gleysols (black cotton soils) and desert. We are really a "World within the World" and have to nurture our physical heritage with care. Our agro-climatic plan has now to be implemented with greater emphasis on water management, soil conservation and more appropriate crops and afforestation, particularly in the eastern tribal belt.

Gujarat is a State where community action has been an important form of organization for evolving solutions to economic and social problems. The tradition goes back to the freedom movement and the work of Gandhiji and Sardar Vallabhbhai Patel. Important educational institutions and cooperative bodies developed then. The tradition of negotiation between mill owners and trade unions go back to the efforts made in the early twenties by Gandhiji and others.

Institutions were built around community strength and leadership was developed from the people themselves and enduring answers obtained to problems. The psychiatrist Erikson has described how the negotiation between Ambalal Sarabhai of the Mill owners' Association and his sister, who was the leader of the textile trade union, the Mazdoor Mahajan, was a turning point in Gandhiji's life itself. It was here that he developed the negotiating skill which he used to a devastating effect in unsettling the Empire on which "the sun never would set". The Ahmedabad Educational Society and many others later were developed in the struggle for Independence with modest contributions initially and were built up into great institutions for social progress. The early origins of industrialization in the Third World were in Gujarat in the last quarter of the last century and, the textile industry of India was the first case of industrialization away from Europe and America and the Indian textile industry, starting in Ahmedabad, grew to be a giant. Later Gujarat showed to the world that dairying need not only be done on ranches. Modern technology could be integrated with the small Asiatic peasant producer through cooperatives, generating output for all and profit for the producer. The Sardar Sarovar Project is the same challenge — using some of the most advanced technologies in water management and conveyance — but depending on highly decentralized initiatives at the village level in the efficient use of water. Innovational reforms is the hallmark of Gujarat and we must continue it.

As I walk the canals of the Sardar Sarovar System for the Narmada Planning Group or sit down with my friends in the Bhal Nalkantha Prayojak Sangh, or Sadguru Foundation in Panchmahals, I am assured that innovation is still with us for in Ukardi in the Chuwhal in the Panchayat of which I am a member, we are solving the problem of repaying the interest cost of the loan we have negotiated with NABARD and in Dahod we are solving the problem of Adivasi leadership for the agro-based development, to come now that the small streams are all harnessed. But it is our towns and cities that must worry all of us. With its prosperity, Gujarat is moving out in a big way, from the walled city: the 'Pols', 'Wadis', — into new 'Societies' outside municipal limits in 'flats', 'tenements' and 'luxury bungalows'. It is here that our systems are breaking down in a big way. Having invested my life's savings in one such small house in Thaltej outside Ahmedabad, I pose this problem to you. The nation and the world will not come to us, if we don't dispose off sewage, supply clean water and keep the roads open. We have to develop the community organizations to avoid the 'plagues' of tomorrow.

University youth must take the initiative and sit with architects like my friend, Balkrishna Doshi and together with the Vepari Mahamandals, civic bodies and others, we must craft viable strategies for urbanising Gujarat. Also, in our social institutions the strength has to be found to counter the crime and racketeering that is coming from such social disintegration. Youth has the idealism and resources to fight these forces.

The State should not only be *the forerunner of the industrial* growth of the Nineties, but must also make a decisive attack on the remaining problems of unemployment and backwardness and dualistic development. We should build the infrastructure to back up some of the fastest growth of industry to be seen in Asia. We should develop the traditional artisan based sources of growth in Gujarat. We have to learn that modern communication, computerization and flexible specialization are add-ons to our trading and artisan skills and the new techniques are not a hindrance. But we must master them. We have also planned for a much faster rate of agro-based industrialization of the State given its soil and natural endowments and the entrepreneurial and trading skills of its people. We must plan that the infrastructural requirements of the new thrust of developments are met by the Government, or are provided by the involvement of business, cooperatives and joint sector organisations to be developed for this purpose. Our effort has always been that as the national economy modernizes, Gujarat should be in the forefront of the regions which will build bridges with national and global markets.

Computerization, fax and e-mail, bring the diaspora and the Gujarati in the national and world markets and his skills and resources within reach — for creative partnerships and arrangements for mutual benefit. These strengths must be exploited. Gujarat will have to be outward looking on a much larger scale in the next phase, rather than emphasizing inward looking reservations or circles which tend to limit its energies.

It is quite clear that the State can meet decisively the challenge overcoming the remaining pockets of structural backwardness and poverty in the next five to seven years. In the 22 tribal talukas of the State great challenges lie ahead. Its drinking water problems as well as educational, health and economic infrastructure in the Eastern belt and parts of Saurashtra need attention. We know the answers to many of these problems. We must move forward now to resolve them.

AGRICULTURAL SCIENTISTS RECRUITMENT BOARD
KRISHI ANUSANDHAN BHAVAN
PUSA, NEW DELHI-110 012

CORRIGENDUM

Reference advt. No davp 1020/18/94 appeared in this magazine on 10 April 1995 for the recruitment of various posts. The name of the centre in respect of the post of Project Director, National Research Centre on Equines, Hissar at Serial No. 4 of Advertisement No. 1/95 of ASRB, has been published wrongly as ‘Engines’ instead of ‘Equines’

All other terms and conditions will remain same.

davp 1020/01/95

National Distance Education Conference

The Third National Conference of the Indian Distance Education Association (IDEA) will be held on 29-30 May 1995, at Shimla under the auspices of the International Centre for Distance Learning, Himachal Pradesh University. The theme of Conference is Helping Each Other and Helping Ourselves — Sharing of Resources and Experiences towards a More Dynamic DE System in India.

The objectives of the Conference are to (i) examine and identify who should help whom, how and at what level, (ii) examine the implications of the changing policies and growing emphasis towards creation of more number of Open Universities and CCIs/DEDs and diversifying the courses and clientele options, (iii) share information, experiences about various experiments made at different levels and in different fields of DE from time to time and evaluate the efforts, (iv) examine the need for creation of new structures meant for ensuring Networking and Coordination, (v) examine the need for Networking and Coordination in DE in India, (vi) examine various steps needed for ensuring coordination, (vii) examine the existing setup for coordination, suggest improvements in the context of changing conditions and steps needed for further legislative and other legal arrangements to achieve the objective, and (viii) recommend policies and actions which foster collaboration, cooperation and proper networking between regional, national and international governmental semi/non-governmental organisations on the one side and open and distance learning institutions including CCIs/DEDs, on the other with the specific objective of helping each other and helping ourselves.

The topics proposed to be discussed at this conference include issues and areas of Networking and Coordination in DE; Existing mechanisms and changes required in the structures; Experiences/case studies/empirical observation relating to experiments made in this regard and the general results; Institutional roles, changing policies and implications of the changes on the system; Learning from others and learning ourselves — examination of qualitative and quantitative issues; Administration and Management aspects; Attitudinal and behavioural dimensions of cooperation, collaborations and networking of activities of personnel systems; and Funding issues.

Further details may be had from Prof. K. Murali Manohar, General Secretary, IDEA, C/o SDLCE, Kakatiya University, Warangal-506 009, India.

Kakatiya Varsity Plans New Courses

Prof. Y. Vaikuntham, Vice-Chancellor of Kakatiya University said that the University had set up a panel to explore the possibilities of introducing postgraduate courses best suited to the backward region of North Telangana in general and Adilabad district in particular. He was speaking as the chief guest at the inaugural function of the Silver Jubilee Celebrations of the Department of Botany of Kakatiya University in Warangal recently.

Prof. Vaikuntham disclosed that Mr. Ar. Sukumar, District Collector of Adilabad, had sanctioned Rs. 35.0 lakhs in the first phase and promised Rs. 25.0 lakhs in the second phase for the construction of permanent buildings for the University Post-Graduate Centre at Nirmal in Adilabad district. The Vice-Chancellor further disclosed that Mr. Sukumar had made a pragmatic suggestion to him to introduce courses, particularly in sciences, relevant to the needs of the district and assured liberal flow of funds for starting more postgraduate courses in this district.

Expressing concern over the large scale deforestation causing ecological imbalance, Prof. Vaikuntham said that the university had already initiated measures for developing a "green belt" all along the university campus so that it might present an aesthetic view and take care of environment.

Prof. Vaikuntham further said that efforts were on to introduce one or two postgraduate courses at the University Arts & Science College and to develop it ultimately into a full-fledged Postgraduate Centre on the Subedari campus of the university.

Speaking on the occasion, Prof. Jafar Nizam, former Vice-Chancellor of Kakatiya University and founder head of department of Botany of erstwhile PG Centre, now upgraded to Kakatiya University, traced the various stages of development over the years. He complimented the faculty for the excellent work done by them in shaping the department into one of the best in the country.

Prof. Vaikuntham released the souvenir brought out on the occasion while the former Vice-Chancellor Prof. Jafar Nizam, a distinguished botanist, released the book on 'Biology of Conjugales' edited by Prof. Vidyavati, a senior member of the faculty. The book contained 14 research articles contributed by eminent scholars from India and abroad.

USEFI Satellite Centre

The United States Educational Foundation in India (USEFI) located at New Delhi, Bombay, Calcutta and Madras has decided to open Satellite Centres in a few selected cities in the country. These Satellite Centres will provide on the spot information and counselling for higher studies in the United States. The Centre at Jaipur, the first in the country, is located at the Students Advisory Bureau, University of Rajasthan main campus (Students Union building). It will provide pre-application forms, test booklets for TOEFL, GRE, GMAT besides information and guidance. Eventually the Satellite Centre will become a test centre also. The Satellite Centre will organise a special lecture regarding the 1996 Fullbright Fellowship programme; on 10th and 11th July there will be a pre-departure orientation course for those students who have secured admission this year, as also information workshops for different categories of students planning advanced education in 1996 and later. The Satellite Centre will function on Tuesdays, Thursdays and Saturdays from 9 am - 12 noon; prior appointments will be appreciated. Mrs G.J. Unnithan, Director, Students Advisory Bureau will function as the honorary adviser.

Panel Discussion on Age at Marriage

Population Education Resource Centre of the Department of Adult Continuing Education & Extension, University of Delhi conducted a panel discussion on "Age at Marriage" at the Centre for Professional Development in Higher Education (CPDHE). Dr. O.P. Malik, National Consultant, UGC, Dr. Gita Atreyi, UNICEF, Prof. Aneeta Minocha, Head, Department of Sociology, Dr. N.K. Uberoi, Director, CPDHE and Dr. P.K. Bhargawa of the Directorate of Adult Education took part in the panel discussion. Over 25 participants comprising teachers, students and research scholars also participated in the discussion.

Prof. S.K. Pal, Head & Dean, Faculty of Social Sciences, who chaired the panel discussion, stressed the importance of the topic in view of International Conference on Population and Development concluded recently in Cairo. He proposed that "Age at Marriage" of girls should be 20 and 24 for the boys. He, however, cautioned that increasing the age at marriage could help only when it was positively linked with education particularly female literacy.

Dr. Uberoi desired that the issue must be discussed throughly in colleges and universities so that the right information could be passed on to the adjoining communities. He also emphasized that age at marriage should be linked with physical maturity of the boys and girls.

Dr. Malik said that the Population Education Resource Centre (PERC) would thoroughly debate the issue "Age at Marriage", Inter-Spouse Communication, AIDS and other issues concerning the socio-economic scene of our society. Development was not a one day phenomenon, it needed constant mobilization particularly of the youth, he added and focused on three issues i.e. Education, Skill Development and Employment particularly female employment. He said that age at marriage should be suitable socially, biologically, emotionally and psychologically so that the couple could discharge the duties of husband and wife. This could be possible only when there was proper education and equal status of the women in the society.

Dr. Gita Atreyi said that continuous decline of female sex ratio adversely affected the population and development. She said that boys and girls in the universities and colleges required proper knowledge about their bodies, importance of marriage and Inter-spouse communication, etc. Simply increasing the age at marriage of girls would not work, she opined and cited examples, of abortion rate, particularly abortion of girl-child in Tamil Nadu which had gone high. In her opinion the immediate need was literacy and status of women.

Dr. Uberoi said that all women should be given education about sex and family life, where the girls and the boys could acquire maximum knowledge about their bodies, reproductive system and in course of time after their marriages at the appropriate time, they could decide about the size of the family.

Dr. Bhargawa, discussed several research studies of various regions of India. He talked about the diversities and socio economic situation affecting age at marriage. His focus of attention was also on Education and participation of women.

Prof. Minocha said that there were certain limitations of raising the age at marriage and we should not go beyond those limits. There was diverse situation in rural and urban India, male and female and further in various states, she added. Prof. Minocha supported the arguments of Dr. Geeta Atreyi and Prof. Pal and said that preference should be given to general employment opportunities particularly among women.

Mr. Rajesh and Mr. B.P. Mohanty, both Project Officers who organised the discussion, raised several questions pertaining to socio-economic situation and age at marriage.

The experts and the panelists after detailed deliberations suggested several ways and means to achieve the appropriate age at marriage. They recommended:

- We should delay the marriage through education, skill development and employment.
- Proper education should be given for adopting the right age at marriage.
- We should adopt proper age at marriage — biologically, socially, psychologically, morally, etc.
- Population Education Resource Centre (PERC) should work for creating proper atmosphere for adopting the right age at marriage.
- The students of the universities/colleges through PERC should approach the adjoining communities for proper communication to the youth regarding the issue.

Women's Education & Empowerment

The International Conference on Women's Education and Empowerment held recently in New Delhi stressed the need for governments to provide greater opportunities to girls for education and skill development. It said, "Patriarchal norms and values and early marriage, low economic levels, household responsibilities, lack of access to eduction or parental motivation are the main reasons for the low level of female literacy in the south Asian region."

• Ms Sabitra Banskota of Nepal, underlined the need for extending agricultural training for women, after which they should be encouraged to participate in forestry and cooperatives.

Ms Banskota, who works in the Women Development Division of the Ministry of Local Development in Kathmandu, Nepal said that her government's Eighth Plan (1992-97) had identified several areas where women's participation could be improved.

But though several positive measures had been undertaken like launching of special programmes for women farmers and creation of a women's cell to promote education for women and girls and strengthen their role in water and energy sector development, there were several constraining factors, she said.

In Nepal, women have a relatively limited access to and control over income credit, education, training and information, Ms Banskota remarked.

Ms Surraya Yasmin of Pakistan, who is Programme Officer, Directorate of Literacy, Quetta, Balochistan said, "this region lags far behind the rest of the country with the female literacy rate a dismal 1.7 per cent. Even the dominant male population in the region is largely uneducated".

According to Ms Yasmin female literacy rate depended directly on two factors — easy access to facilities and special motivation. Many parents would not send their daughters to schools because buildings were poorly constructed and were often not within safe walking distance, she said.

Illiteracy and low level of education would hamper development of the entire region. Illiterate women could not be fully effective as wives and mothers, she remarked.

The relationship between an educated man and his uneducated wife would be more like that of master and servant, Ms Yasmin said, adding that "An uneducated mother will not be able to give her children useful guidance or counselling in their school activities." Quoting from a 1994 official report, she said the enrolment ratio of boys and girls was 4·1. The school participation rate for girls was only 17 per cent while the dropout rate for girls between kindergarten and class five was an astounding 94 percent.

In order to stem this alarming trend, she suggested that non-formal education projects be aimed at women. "Local issues should be linked with policy change while leadership positions should be assumed both by men and women," she said.

Social movements like youth and cultural movements, women's organisations and communities could also play key roles in raising female education, Ms Yasmin felt.

Describing the administrative infrastructure as inadequate to meet the needs of women's education in Nepal, Ms Banskota suggested strategies to enhance educational opportunities.

The present curriculum was not in accordance with the real life situation of girls, Ms Banskota pointed out.

However, she said, in some rural areas child care centres had been established under the Production Credit for Rural Women (PCRW) programme and the Small Farmers Development Programme (SFDP) so that elder girls were free to attend school. The Chelibeti (girl child) Programme was launched for girls unable to attend school or had dropped out at the primary level.

She suggested expanding the Chelibeti Programme. Besides, there should be a direct link between women's education and work by making it more functional, the Nepalese delegate added.

B.Sc in Medical Technology

The Delhi University College of Medical Sciences (UCMS), Guru Tegh Bahadur (GTB) Hospital, proposes to start a three-year B.Sc. degree course in medical technology from the next academic year. This is being done keeping in view the rapid technological advances in the field of diagnostics. It could enable the medico-technical personnel to keep themselves abreast of the latest medical technologies.

This course will make them conversant with the latest sophisticated modalities and provide better employment opportunities in government and private sector. The UCMS is the third such institute in the country after the AIIMS, New Delhi, and the PGI, Chandigarh, to start such a vocational degree course in medical technology.

Candidates with a qualification of 10+2 (Biology or vocational stream), trained X-ray technicians or diploma-holders are eligible for admission of this course.

Panjab Welcomes Private Initiatives

The Panjab Chief Minister, Mr Beant Singh stressed the need for strengthening the network of private educational institutions and bringing about a qualitative improvement in the total system. He was presiding over a high-level meeting of representatives of managements and heads of government-aided and privately managed colleges federation held in Chandigarh recently. He said private institutions were making noticeable contribution towards the education system and supplementing the efforts of the government in promoting academic environment in the state. The government on its part would do its best to provide financial assistance and administrative support for making the functioning of such institutions more meaningful.

The Chief Minister said that the managements running private colleges should come forward for opening more colleges and schools with special emphasis on primary education in rural areas. The private institutions, he said, should also inculcate among the students secular ideologies. The education system and institutions should keep the students away from communalism and fundamentalism.

Mr Singh constituted a committee with representatives of the privately managed colleges federation, representatives of the people and government officials to ensure a continuous and constant dialogue for sorting out various issues from time to time. He directed the Education Department that this committee should meet frequently and sort out the pending issues.

The Chief Minister said the privately managed and aided colleges would be given representation on the university syndicates and senates.

The President of the Sanatan Dharam Educational Institutions, Pt Mohan Lal, said that the government should ensure more effective coordination and regular interaction with the privately managed institutions and give top priority to the field of education as it formed the basis of the total developmental process.

The General Secretary of the privately managed colleges federation, Mr B.S. Behl, said that this body represented 140 colleges spread all over Panjab and catered to 80 per cent population for imparting education.

The Chairman, Punjab School Education Board, Mr Harnarinder Singh, the Secretary Education, Mr Bhagat Singh, and heads of various DAV, Khalsa, Sanatan Dharam and other institutions attended the meeting.

Seminar on Extension Education

A two-day All India Seminar on Extension — The Third Dimension of Higher Education was recently organised by the Centre for Adult, Continuing Education and Extension (CACEE), Lucknow University. The objective of the seminar was to explore the scope and fields of Extension in different disciplines being taught in universities and colleges.

Introducing the theme Dr. J.V. Vaishampayan, Director, CACEE, Lucknow University, said that the traditional approach was to keep the universities confined to two activities only i.e. teaching and research but these kept the universities secluded from the community at large. He said that at any time, the number of students going to the universities had always been less than one per cent while only five per cent of the population had the privilege to go in for higher studies. Thus, it meant that a large section of the society was deprived of higher education. He emphasised that extension in education was an attempt to take knowledge to the community. The scope for extension existed in many disciplines being taught in the universities, he added.

Mr. M. Ramchandran, Secretary, Higher Education, U.P. Government in his inaugural address, stressed the role of regular teaching in the universities. Dr. R.P. Gangurde, Additional Secretary, UGC and Prof. D.D. Sharma, Pro-Vice-Chancellor, Lucknow University and Sri J.L. Sachdeva, Director, Indian Adult Education Association, New Delhi, also spoke on the occasion.

The seminar was divided into four sessions and the papers were presented on management, philosophy, education, psychology, home science, adult education, law etc. These included (i) Extension as the Third Dimension of Higher Education; (ii) Extension Education, the Need & Concept; (iii) Management Science — Not for Business Alone; (iv) Psychology and HRD within a Community; (v) Status of Extension in General Universities; (vi) University System and Extension as the Third Dimension; (vii) Philosophy of Extension and Extension of Philosophy; (viii) Women Empowerment through Extension; (ix) Operationalization of Extension with Reference to Geography; (x) Home Science Extension — Approaches to Betterment of Life at Home; (xi) Scope of Legal Aid and Legal Literacy for Extension Activities by Adult Education Programme; (xii) The Complex Nature of Adult Learning; and (xiii) Problems and Prospects of Extension Education as Third Dimension under University System.

Refresher Course in Instrumentation

The first all India Refresher Course in Instrumentation for Technical Officers/Scientific Officers of University Science Instrumentation Centres (USICs) in the country was recently conducted at the Western Regional Instrumentation Centre, Bombay, under the auspices of the Academic Staff College of the University of Bombay.

The course curriculum comprised partly in updating the participants on recent advances in the established areas of instrumentation and, in part, exposing them to the contemporary and emerging techniques and technologies which are transforming the instrumentation scenario. A section was devoted to a critical exposition of instrument performance appraisal parameters by experts.

The topics discussed included: measurement errors and instrument inaccuracies, instrument standards and calibration, reliability, ergonomics of instrument design, signal conditioning and processing including correlation and digital fourier analysis, sensors and transducers for temperature, displacement, pressure and flow measurement, chemical, electrochemical and photoelectric transducers, gas chromatography and high performance liquid chromatography, biomedical instrumentation, fibre optic sensors for instrumentation, magnetic resonance spectroscopy, microprocessor and microcontroller-based instrumentation and data acquisition systems, automation of instrumental methods, and instrumentation — a systems approach.

A component of environmental studies was included as is now stipulated by the UGC. This comprised air pollution monitoring instrumentation, environmental and pollution standards, and sources and effects of environmental pollutants.

Laboratory sessions formed an integral part of the course and provided hands-on experience to the participants in the areas of analog and digital electronics, microprocessor instrumentation, power electronics, mechanical shop practice, optical shop practice and sophisticated, instrument fault-diagnosis and maintenance tools. The participants were also familiarised with modern library, information and documentation techniques, retrieval of literature information, databases and bibliographies, etc.

The participants visited the Institute for Design of Electrical Measuring Instruments, Bombay, and the Electronic Regional Test Laboratories, Bombay. This exposure brought them in contact with industrial instrumentation : test and measuring equipment, control instrumentation, and calibration techniques and protocols. An exhibition and demonstration of laser sources and laser-based equipment for laboratory experiments was arranged for the benefit of participants with the help of a manufacturer while another such programme was organised on microprocessor development systems and debugging tools with the assistance of a local manufacturer.

Workshop on Autonomous Colleges

An integrated strategy for improving the quality of autonomous colleges substantially needs to be formulated. This should cover various areas such as restructuring of academic programmes, curricula development, teaching-learning process and examination reforms, said Prof. K.B. Powar, Secretary-General, Association of Indian Universities (AIU). He was delivering the key-note address at a two-day workshop on autonomous colleges organised by the Madras University and the Southern Regional Office (SRO) of the University Grants Commission (UGC) at Madras.

Prof. Powar said priority must be given to restructuring of academic programmes, especially at the undergraduate level. An appropriate mix of foundation courses, core courses and applied courses should be provided and the colleges could fit in vocationalisation of courses in such a structure. The need for revising curricula regularly was more in the case of professional courses such as engineering and medicine. The teaching-learning process had to be made interesting with an emphasis on the learning aspects. Continuous evaluation, instead of examinations at the end of the academic period, should be given more importance.

He said though it was proposed to accord autonomy to 500 colleges in the VII plan period, only about 110 colleges were given this status. He called upon educationists to identify the reasons and suggest remedial measures in the context of suspicion nurtured by a section of the academic community for the concept of giving autonomy to colleges.

Prof. Powar listed two conditions for the success of autonomous colleges: 1) students should have a keen desire to learn; and 2) the teacher must be dedicated to his profession. The former called for a selective process of admission and the latter, cast special responsibilities on the teacher to continuously analyse and reframe curricula, make changes in methods of teaching of evaluation and take special efforts to draw out the best in students.

Inaugurating the workshop, Mrs Jayanthi stressed the need for giving freedom to teachers of autonomous colleges in learning and evaluation process.

Presiding over the function, Prof. P.K. Ponnuswamy, Madras University Vice-Chancellor, said though Tamil Nadu stood ahead of other States in granting autonomy to the maximum number of colleges, it was unfortunate that only one autonomous college, viz., Avinashilingam Home Science College, became a deemed University falling in line with the recommendations of the Kothari Commission.

Mr K. Gunasekaran, Deputy Secretary and Head of SRO, UGC, Hyderabad, welcoming the gathering, said the Southern Regional Office, which started functioning in September last year, had so far released Rs. 50 lakhs to almost all the autonomous colleges in the region. Prof. K.V. Kaliappan, Director of the Academic Staff College in the Madras University, proposed a vote of thanks.

Prof. S.V. Chitti Babu, Vice-Chairman, Tamil Nadu State Council for Higher Education, who later chaired a session, said autonomous colleges should always be accommodative towards innovations in the field of teaching. Dr. S. Muthukumaran, former Vice-Chancellor, Bharatidasan University, wanted "secrecy" in the examination system to be removed as it had not helped in curbing malpractices. Prof. B. Sampath Kumar, Principal of PSG College of Arts and Science, Coimbatore, said the universities tended to treat autonomous colleges on par with the other category of colleges, without taking into account the reforms carried out by the former in the area of higher education.

BIT Mesra Convocation

The Convocation of the Birla Institute of Technology was recently held at Mesra (Ranchi). The convocation address was delivered by Shri K.R. Narayanan, Vice-President of India. Dr. A.R. Kidwai, Governor of Bihar and Chancellor of the Institute presided and conferred the degree of Doctor of Science, (Honoris Causa) on Dr. A.P.J. Abdul Kalam, an eminent scientist, for his contributions to Aero Space Technology.

In his extempore address Shri Narayanan appreciated the on-going researches and academic programmes in the Institute, especially, in the fields of Electronics, Robotics, Space Engg. & Rocketry etc. He also appreciated the role played by B.I.T. in producing excellent technical manpower and, thus, contributing towards the technical and industrial development in the country, particularly in Bihar as a mentor in the Hi-Tech and other fields being a centre of excellence and technical university in the state.

Shri G.P. Birla, Chairman, Board of Governors, Birla Institute of Technology, in his welcome address, said, "Utilisation of science & technology for exploiting the varied natural resources through highly trained technical manpower can usher an era of prosperity not only in the eastern region but in the entire country as well. The vast resources awaiting development make the setting ideal for this technical university."

Dr. B. Kanta Rao, Vice-Chancellor, in his report, said that apart from the standard engineering curricula, the Institute was committed to three areas i.e. the Space Engineering, the Industrial Research and the Small Industries Research and Development Programme. He said that the Institute had good infrastructure in Computer Vision, Fibre Optics, Artificial Intelligence, Real Time Computer Applications, Flexible Manufacturing Systems, Computer Aided Design, Pollution Testing and Pharmaceutical Instrumentation.

The Institute had also introduced two postgraduate programmes to meet the current needs of the country; the programme of Biomedical Instrumentation and Information Sciences. The Biomedical Instrumentation programme was developed interactively with the B.M. Birla Heart Research Centre, Calcutta. The Information Science programme exposed the students from the conventional library sciences to the most modern information processing technologies of the world, he added.

The Institute, Dr. Rao said, had initiated a four year undergraduate programme entitled Polymer Engineering to meet the industrial demands in biomedical and engineering industries, particularly surgical disposables.

The Institute had set up Space Engineering Department in 1978 and had developed solid and Liquid fuel propellants.

The Institute's pragmatic approach of promoting small industries, resulted in technology transfer and promotion of techno-entrepreneurs. This effort combined assimilation of theory and practice effectively. This was now a National Programme, known as the Science and Technology Entrepreneurs Park (STEP), Dr. Rao said.

The Institute had initiated a number of training programmes, short term in nature to enable tribal boys and girls learn modern technologies. The programmes are for T.V. repair, Pump mechanic, Computer training and production of small items. The Institute was also running modular computer training programmes with ATI for SC/ST candidates.

Dr. Rao disclosed that the Institute had acquired the latest Information Technology with paperless journals available through CD-ROMs. Sixteen Network Systems had access to CD-ROM disks through Novel network for quick and immediate access to the world at large, through INET and NICNET.

With support from BISR, BREDA, the BIT-STEP had successfully established a salt gradient solar pond capable of delivering 4000 watts of continuous electrical power. Ways and means of utilizing the stored energy in the solar pond was under progress.

Immediately after the convocation, Dr. A.P.J. Abdul Kalam, visited the top laboratories in various departments and also delivered a highly enlightening lecture.

We Congratulate .....

1. Dr Vasant Gowarikar who has taken over as Vice Chancellor of the University of Poona, Pune.

2. Dr. G.K. Veeresh who has been appointed Vice-Chancellor of the University of Agricultural Sciences, Bangalore.

News from UGC

Countrywide Classroom Programme

Between 7th May to 21st May, 1995, the following schedule of telecast on higher education through INSAT-ID under the auspices of the University Grants Commission will be observed. The Programme is presented in two sets of one hour duration each every day from 6.00 a.m. to 7.00 a.m. and 1.00 p.m. to 2.00 p.m. The programme is available on the TV Network throughout the country.

Ist Transmission

6.00 a.m. to 7. a.m.

7.5.95

"Bookfare"

"Travelogue of Hindustani Music - Part II : Khayal"

"The Week Ahead"

9.5.95

"Principles of Magneto Hydrodynamic Power Generation"

"Health Environment Geography"

"Acupuncture-Part I: Impressions"

11.5.95

"Reactive Polymers-Uses and Applications"

"Financing Higher Education"

"Literary Work and Copyright"

13.5.95

"Mean Value Theorems-Part 2: Rolle's Theorem

"Economic Thoughts of Karl Marx-Part I"

"Fresh Water Ecology"

14.5.95

"New Horizons"

"Bubbles"

"The Week Ahead"

16.5.95

"Question Time"

"Uninscribed Coins of Andhra"

"Acupuncture - Part II: Experiences"

18.5.95

"Synthetic DNA - Uses and Applications"

"The Right to Choose-Ballot Power"

"Art of Translation"

20.5.95

"Mean Value Theorems-Part 3: Lagrange's Mean Value Theorem"

"Economic Thoughts of Karl Marx - Part 2"

"Loktak Lake in Peril"

21.5.95

"Newspaper"

"Travelogue of Hindustani Music-Part III: Light Classical Music"

"The Week Ahead"

II Transmission

1.00 p.m. to 2.00 p.m.

8.5.95

"Efficient Lighting"

"Grain-Q"

9.5.95

"The World of Adhesives-Part 3"

"Prof. M.V. Mathur-A Perceptive Perceptor"

"Oxygen Radicals and Antioxidants-Part II: Definition and Effects"

10.5.95

"Role of Energy Management Centre in Improving Energy Efficiency"

"Sandstone in Construction"

"Prawn Farming-Part I : The *Scope of Prawn Farming*"

11.5.95

"Fibre Materials and Fabrication-Part I"

"Culture of Ancient Cities: The Civilisation of the Sozhou"

"A World of English-Part I"

12.5.95

"New Horizons"

"Introduction to Nuclear Astrophysics"

13.5.95

"Variations on America - Part I : Ragtime Era Compositions"

"Ramparts of Heaven-The Himalayas"

"Career Counselling: Fine Arts"

"The Week Ahead"

15.5.95

"Question Time"

"Potential Field as a Description of Field Space"

16.5.95

"The World of Adhesives-Part 4"

"Oxygen Radicals and Antioxidants - Part III: Gene Expression and Oxidative Stress"

17.5.95

"Renewable Energy"

"Muddle Fuddle"

"Prawn Farming - Part II: Technology of Prawn Farming"

18.5.95

"Fibre Materials and Fabrication-Part II"

"Rocks and Mountains"

"A World of English - Part 2"

19.5.95

"Fibonacci Numbers - Part I"

"Research in Political Science: Documents"

"Environmental Science & Technology"

20.5.95

"Variations on America - Part II: Three Rags by Eubie Blake"

"*Images of Macbeth*"

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BOOK REVIEW

A Trend Setter in Gandhian Studies

Anima Bose*

Anil Karn. Science of Satyagraha. New Delhi, Calyx Publications, 1994. Pp. 331. Rs. 600/- $80.

Sir, As a visiting student, I attended the 82nd Indian Science Congress and was impressed to note that for the first time in the history of the Congress a paper on Gandhiji's "satyagraha" as science was presented. The scientific approach to the creation of the conditions of peace and non-violence by Gandhiji is fascinating. Dr Anima Bose presented her paper on this subject. 'Yours, etc., Wendy Worham, Fitzwilliam College, Cambridge, Jan. 5.

The Indian Science Congress is held once in two years. The above letter that appeared in *The Statesman* of 24th January, 1995 makes the point significantly that in all these 164 years, this is the first time that such a paper was invited. The publication of the book under review may be considered to be a pointer. In the days to come, there will be more and more interest in the unique contributions of Gandhi in the varied fields of life and living as was evinced at the 82nd session of the Indian Science Congress held at Jadavpur, Calcutta.

In *Science of Satyagraha*, the author "attempts to decipher mathematical order in Nature.........., (also) to decipher mathematical order in the Satyagraha movement built by Gandhi" as he assures the readers in the preface of the book. His expectation is that "the book will bring immense insight into the organizational aspect of Satyagraha movement." (*Preface*)

Chapter I of the book, Political Leadership — a theoretical analysis, deals with "organismic studies" tracing these back to Plato's *Republic*, adding to the list Suzanne Keller's *Western Industrial Society*, V. Pareto's understanding of society as "an integrated system", and attempts by C. Wright Mills to effect "a synthesis of Marx, Mosca and Pareto" among others. The author points out that these organismic models are system dominant. He then takes up "mechanistic models" which according to the author present less interdependence than found in organismic models which he does not discuss in any detail. He feels these two models are best understood as "competing for power among themselves." (P 5) Depending on the "elite case study analysis" already done "we may conclude" says the author that different models have been found most appropriate for different leadership situations (P. 5). He does not however, discuss these "case studies" in this chapter and the readers will have to take his word for this. I do not see what purpose has been served by including these pages when the author admits in the same paragraph that "there is a continuum (the author's spelling) between these two models".

In the same chapter, the author concludes that leadership in human society emerges and sustains itself because of inherent inequalities & cultivated inequalities — a valid reasoning. However, the author upholds the theory that development of personality is influenced by "dynamic interaction between inherent talent and social environment." Isn't that theory dependent upon the "chance" factor in the emergence of leadership?

Gandhi's leadership, the author believes, was built up by the importance and focus on non-violence — which he calls "Satyagraha Generalship" and through non-violent struggle Gandhi "tried" (author's word) to cultivate the positive elements among his followers so that they would emerge as autonomous Satyagraha Generals.

"A Critical Assessment of Gandhi's Political Leadership" is the title of Chapter II. The author quotes Judith M Brown's theory that the South African struggle created Gandhi the leader and "armed him with a battery of weapons for political welfare". In South Africa he beat out his ideas and techniques of leadership: he gained experience. He became a pragmatist leader; also a "mature idealist" — whatever that phrase means. The author quotes with interest (P. 38) that "Gandhi was successfully projecting himself as the messiah of the masses and was creating deep impression on the mass psyche". There is no argument given in favour of the first part of the statement — because Gandhi did not have to "project himself" — he was filling the void created by the absence of older national leaders

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*Director, Centre for Peace Education, Delhi "*who had either died or been discredited*" as the author himself points out (P.38). With the passing away of Gokhale in 1920, "the choice for leadership of national *movement fell upon Gandhi*" would be a statement historically correct.

In this chapter, it was interesting reading Gandhi's own words. "I became my own General of Satyagraha and my first recruit in 1906. I announced my generalship in 1918 in India" which the author quotes from The Collected Works of Mahatma Gandhi" (CWMG, Vol. 14, P.306). As a leader, Gandhi's self assessment was — "non-violent collective action is among the rarest and precious gifts received by mankind in all history" (P.47). Gandhi had read sufficient history and he did not see such an experiment on so large a scale for the establishment of democracy by non-violence" (*ibid*).

The author examines the various approaches adopted by the analysts of Gandhi's leadership, viz. in the same chapter from the angles of (a) marxist approach, (b) liberal approach, (c) conservative or reactionary approach, (d) classical/civilizational leadership approach, (e) military generalship approach, (f) creative leadership approach, (g) multidimension and dynamic leadership approach, and (h) mixed leadership approach (Pp. 49-70) and concludes that Gandhi's leadership was "a new type of leadership, something that human history has never witnessed before". One does not see the justification of the a-h approaches since these approaches have not been described or analysed in depth by the author. What was the basis of this classification any way? One wonders if the classification headings were well thought out.

Chapter III deals with Gandhi's political ideology emphasising an evolutionary non-violent creative society. The author regrets that Gandhi "could not de*vote sufficient time and energy for* evolving a theoretical model of such a polity. And then in the next sentence the author says "In fact, there was reluctance on the part of Gandhi to fully develop a theoretical model of the evolving polity". (P.78). It is not quite clear what the author wishes to convey to the readers The author finally opines that Gandhi's political ideology was "an ideology of revolution by non-violent, direct mass action. It does not concentrate on the capture of power, nor does it depend on "the power of the State.... It is an ideology of People's power". The emphasis that Gandhi's ideology (did Gandhi have one in the popular understanding of this terminology — "Ideology", as has been used in common parlance in our time?) was to go direct to the people, inspire them to have a revolution in their own individual lives, gradually involving the community thus creating power — for a human society "where the last and the least" will have as much a place as the others, rooting out violence between individuals, groups and nations. In other words, a new social order whose members, men, women and children would bring about a decentralization of power — firmly against the concentration of political power in one person or a group?

Chapter IV deals with "Gandhi as the Satyagraha General" — rather an unconventional title for a chapter of a book that is dealing with the Mahatma. However, this General is "a democrat; builder of a non-violent polity". Gandhi is a Satyagraha General whose func*tions are "to define the collective in*terest of the Satyagrahies for their collective interest"; "to prepare his plan of action and develop his strategy and tactics"; "to mobilize re*sources to attain the objectives*"; "ensure social support and cooperation which may demand radical social reforms and unprecedented collective and individual sacrifice"; "he must have expert knowledge of the non violent struggle"; "he must have deep understanding of the strength and weaknesses of his own soldiers"; and "he must impart training to non-violent soldiers according to the challenge facing them".

The rest of this chapter describes what is collective interest, personal qualities of the Satyagraha "General", Satyagraha "Soldiers", "non-violent warfare" "Retirement", among others. One wonders why the author uses the military terminologies in this descriptive chapter, as one can easily notice, instead of the terminologies that Gandhi used in his own language, after all, Satyagraha has become a part of English language in Gandhiana. Why not the other words Gandhi used in this particular concept of his? He refused to let "civil disobedience" become a phrase to be used where the satyagraha was the movement as Gandhi himself describes this in his Autography.

The emphasis in this chapter on the Gandhian approach to politics based on non-violence as an important support for consensual decision making and conflict resolution in inter-group and inter-personal context has tremendous importance in the present day happenings in our country in this last decade of the 20th century.

Chapter V deals with method of leadership building and a theoretical analysis of the topic. This chapter has four interesting diagrams to help understand the growth of violent struggles launched by Gandhi in his time.

Chapter VI deals with leadership building again, with operational dynamics. It has 46 diagrams, big and small, to explain the operational dynamics of leadership building. The author says that Gandhi believed that "every human being" can actualise his/her capacity to make supreme sacrifice through organizing progressively more difficult Satyagraha movement — personal, local, national, global : limited as well as general, Gandhi limited himself to personal, local, national and limited and general Satyagraha. This chapter covers P. 192-263, 71 pages and has details of Satyagraha because *Satya* has overwhelming importance in the Gandhian movement. Therefore, one must understand the conceptual dynamics of Satyagraha. It must be understood at the level of a) thought, b) decision, and c) action. At the level of thought, Gandhi operated at two different planes a) idea based, b) pragmatic. In the case of decision or action, he operated only on the plane of pragmatism. His objective was "to convert every human being (could we say as many as he could without any coercion?) into a non violent polity in one's own self — to create a non-violent, creative, global, social order". His was the Satyagraha of the brave. But this was unattainable during his life time. Any student of the Satyagraha movement, its theory, operational dynamics, leadership building and its social and historical understanding must read this particular chapter. It offers much food for thought.

The concluding chapter of this book pays tribute to Gandhi as the "creator" of the science of satyagraha. (science seeks Truth; discovers it; but "creator"?)

The author says that Gandhi had no time to concretise this science of Satyagraha. This point is not clear. What does the author wish to convey? That Gandhi's perception of, experiment with, and practice of Satyagraha can be called a *predictory science*? He did experiment with non-violence and its power to innovate and to promote brotherhood — this is well accepted. His Satyagraha had also the distinction of opening up a new chapter in world's history in our time, that freedom can be achieved by means of non-violence, self-suffering and peaceful conflict resolution. His Satyagrahas were successful in as much as opening up a new chapter of achieving freedom through "Transfer of Power" instead of through conflict, bloody wars and violence as had been the historical evidence during the period of the world's history of imperialism, power wielding and colonising of nations through economic and sheer brute force. After 1947, the "transfer of Power" became the more common pattern as can be seen in recent history. But how does one "concretise" any science; leave alone the science of Satyagraha which deals with human beings and cannot be reduced to a "quantum" theory, or an exact science?

At the frontiers of science, both at the microcosmic level of quantum physics and the macrocosmic level of astrophysics and cosmology, the outcomes of experiments are variable. On this level, precision in results cannot be determined.

This book has exhaustive notes appended to each one of the seven chapters. The first chapter on political leadership — A theoretical analysis, has 158 notes. The second chapter on Gandhi's Political leadership — A critical assessment, has 172 notes. The third chapter on Gandhi's political ideology has 305 notes. The fourth chapter on Gandhi — The Satyagraha-General, has 219 notes. The fifth chapter on method of leadership building — A *theoretical analysis*, has 243 notes. The sixth chapter on leadership building - operational dynamics, has 46 diagrams.

It is enriched by an extensive bibliography covering 272-296 — 24 pages of very useful titles including the latest one on the subject, literally from A to W, if not Z. The index which covers A to Z, is helpful for ready reference.

It is hoped that this book will open up a new vista in Gandhian studies. The style is unconventional. The author's analysis sets in a new trend; it captures the reader's attention. Student and research scholars will find quite a few perceptions goading them to go deeper into Gandhian studies, his principles, and action, and offer innovative and creative interpretations. The time has come to take another look at Mohandas Karamchand Gandhi and direct our thinking and action towards his principles and how he translated them into actualities, and direct our thought, action, our being and becoming towards his priceless contribution to humanity perceiving the strength of Satyagraha which he experimented with throughout his life, unto the end.

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RESEARCH IN PROGRESS

A list of research scholars registered for doctoral degrees in Indian Universities

SOCIAL SCIENCES

Psychology

1. Mishra, Abha. **A study of linear relationship in psychosocial stress, coping and somatic adaptation.** BHU. Dr A K Srivastava, Department of Psychology, Banaras Hindu University, Varanasi.

2. Pathak, Vinita. **Diagnostic markers of psycho-pathology.** BHU. Dr M K Mandal, Department of Psychology, Banaras Hindu University, Varanasi.

3. Roy, Malini. **A neuropsychological study of epileptics.** BHU. Dr R G Sharma, Department of Psychiatry, Banaras Hindu University, Varanasi.

4. Singh, Asima. **A study of the personality of older women.** BHU. Dr (Mrs) Reeta Kumar, Department of Psychology, Banaras Hindu University, Varanasi.

5. Sundd, Seema. **Some stimulant drugs and behaviour.** BHU. Dr A P Shukla, Department of Psychology. Banaras Hindu University, Varanasi

6. Upadhyay, Neelam. **Handedness and psychopathology.** BHU. Dr M K Mandal, Department of Psychology, Banaras Hindu University, Varanasi.

Sociology

1. Adhikari, Durga Bahadur. **Dimension of industrial relations in Nepal.** BHU. Dr S R Yadav, Department of Sociology, Banaras Hindu University, Varanasi.

2. Agrawal, Shobha Rani. **A sociological study on drug abuse.** BHU. Prof C B Tripathi, Department of Forensic Medicine, Banaras Hindu University, Varanasi.

3. Asthana, Deepak Lal. **Jain dharma main nari kee sthiti evam paristhiti.** BHU. Dr S R Agrawal, Department of Sociology, Banaras Hindu University, Varanasi.

4. Parajuli, Biswo Kallyan. **Sociological study of Pokhara Town in Nepal** BHU. Dr O P Gupta, Department of Sociology, Banaras Hindu University, Varanasi.

5. Raghuvansh, Sharad Kumar. **On some demographic models and their applications.** BHU. Dr K N S Yadav, Department of Statistics, Banaras Hindu University, Varanasi.

6. Sharma, Reena. **Social canpareb of gyonut patients : A study in medical sociology** BHU. Prof P N Pandey, Department of Sociology, Banaras Hindu University, Varanasi.

7. Singh, Archana. **Gramin kshetra mein balikayon kee shiksha se sambandhit samajik samasyaon ka samaj vaigyanik adhyayan.** BHU. Prof A L Srivastava, Department of Sociology, Banaras Hindu University, Varanasi.

8. Singh, Himanshu Kumar. **Banaras main rah rahe Maharashtriyan samaj ka samaj shestriya adhyayan.** BHU. Dr M K Chaturvedi, Department of Sociology, Banaras Hindu University, Varanasi.

9. Singh, Jitendra Kumar. **A study on rural migration and its implications.** BHU. Dr S Tripathi, Department of Statistics, Banaras Hindu University, Varanasi.

10. Soni, Meena. **Some aspects of out migration and its effects on fertility on population growth.** BHU. Dr K N S Yadava, Department of Statistics, Banaras Hindu University, Varanasi.

Political Science

1. Dirar Mohd Abdel Qader. **Peace process in Middle East : Jordanian response.** BHU. Dr A S Upadhyay, Department of Political Science, Banaras Hindu University, Varanasi.

2. Sanjay Kumar. **The U N peace keeping role in the post cold war period.** BHU. Dr R H Sharan, Department of Political Science, Banaras Hindu University, Varanasi.

Economics

1. Jayaraj, N. **Economic analysis of the state expenditure.** Kerala. Dr G Karunakaran Pillai, Prof, Department of Economics, University of Kerala, Kariavattom.

2. Jyothi, V. Uma **Technology in health services in Kerala : An economic analysis.** Kerala. Dr V Nandamohan, Department of Futures Studies, University of Kerala, Thiruvananthapuram.

3. Krishna Kumar, A. **Economics of cassava production and marketing.** Kerala. Dr M V George, Mammoottil, Kanaka Nagar, Thiruvananthapuram.

4. Singh, Gauraw. **Antararashtriya Mudra Kosh evam arthik vikas : Bharat ke sandarbh mein.** BHU. Dr M P Singh, Department of Economics, Banaras Hindu University, Varanasi.

5. Singh, Manjul Kumar. **Export prospects of horticultural products from North Bihar.** BHU. Prof G S Kushwaha, Department of Economics, Banaras Hindu University, Varanasi.

Education

1. Dubey, Gunjan **Academic achievement and attitude of students pursuing BEd courses through distance : conventional mode of education.** BHU. Dr H C S Rathore, Department of Education, Banaras Hindu University, Varanasi.

2. Pandey, Padmnabh. **The relationship of achievement motivation and academic achievement with emotionally and behaviourally handicapped.** BHU. Dr P C Shukla, Department of Education, Banaras Hindu University, Varanasi.

3. Ram, Bal Chand. **Swatantrayottar shaikshik parihasya evam anusuchit janjatiyan : Baliya Janpad ke vishesh sandarbha mein.** BHU. Dr Geeta Rai, Department of Education, Banaras Hindu University, Varanasi.

4. Singh, Shambhu Sharan. **Prathamik star ke shikshakon kee shaikshik, samajik sthiti tatha jeevan mulya.** BHU. Dr Kamala Rai, Department of Education, Banaras Hindu University, Varanasi.

5. Singh, Shivaji. **Mahatma Gandhi evam Dr Bhimrao Ambedkar ke shiksha darshan ka tulanatmak adhyayan.** BHU.

Dr Deepa Rani Saxena, Department of Education, Banaras Hindu University, Varanasi.

6. Singh, Sunil Kumar. **Feed back to students in distance education : Ex post-facto study.** BHU. Dr H C S Rathore, Department of Education, Banaras *Hindu University*, Varanasi.

Commerce

1. Anand, Shio Dayal. **Performance appraisal of State Bank of India Capital Markets, SBICAP, Ltd.** BHU. Dr A R Tripathi, Department of Commerce, Banaras Hindu University, Varanasi.

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HUMANITIES

Philosophy

1. Dhammajoti, Rev Beligalle. **A critical study of the Buddhist economic philosophy as expounded in the Pali canonical texts and commentaries.** BHU. Prof K N Mishra, Department of Philosophy and Religion, Banaras Hindu University, Varanasi.

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4. Singh, Babita. **Vyakti aur Hetwabhas : Nyaya evam Buddha darshan ke alok mein.** BHU. Prof B N Singh, Department of Philosophy, Banaras Hindu University, Varanasi.

5. Subhash Chandra. **Mahamana Pt Madan Mohan Malaviya aur Hindu dharma.** BHU. Dr D A Gangadhar, Department of Philosophy, Banaras Hindu University, Varanasi.

Religion

1. Indushekhar Singh. **Nari samaj ke abhyuthyan mein Baudhha dharma ka yogdan.** BHU. Dr K C Jain, Department of Pali and Buddhist Studies, Banaras Hindu University, Varanasi.

Fine Arts

1. Yadav, Moti Lal. **Paryatan aur tirth yatra evam kala puravashesh kee drishti se Uttar Pradesh ke pramukh tirth kendron ka adhyayan.** BHU. Dr D B Pandey, Department of History of Art, Banaras Hindu University, Varanasi.

Drawing & Painting

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Music

1. Tripathi, Ram Gopal. **Bharatiya sangeet shastra mein lok sangeet ka prabhav.** BHU. Dr R P Shastri, Department of Instrumental Music, Banaras Hindu University, Varanasi.

Language & Literature

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Sanskrit

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2. Chaudhary, Prabhakar. **Nigrahasthananam sameekshatmahamdhyayanam.** BHU. Dr Anjneya Shastri, Department of Vedic Darshan, Banaras Hindu University, Varanasi.

3. Das, Nishchal. **Shrimadbhagawatgitapatanjalayogdarshanyostulanatmakamadhyayanam.** BHU. Dr Sudhanshu Shekhar Shastri, Department of Vedic Darshan, Banaras Hindu University, Varanasi.

4. Dubey, Girish. **Spashtadhikar sameeksha.** BHU. Dr Chandrama Pandey, Department of Jyotish, Banaras Hindu University, Varanasi.

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6. Gupta, Sushil Kumar. **Bharatiya jyotish mein Vapudev Shastri ka yogdan** BHU. Dr Ram Chandra Pandey, Department of Jyotish, Banaras Hindu University, Varanasi.

7. Joshi, Bipin Chandra. **Vishnu dharmottar Puran ka sahityik evam darshanik adhyayan.** BHU. Dr Uma Joshi, Department of Sanskrit, Banaras Hindu University, Varanasi

8. Manjari **Prajatantrik pariprekshya mein Manu kee shasan vyavastha.** BHU. Prof B Bhattacharya, Department of Sanskrit, Banaras Hindu University, Varanasi.

9. Maurya, Arvind Kumar. **Boddh Sanskrit sahitya mein mar.** BHU. Dr Surya Prakash Vyas, Department of Jain Buddha Darshan, Banaras Hindu University, Varanasi.

10 Mishra, Amrendra Kumar. **Praglankaranam Panditrajvihitkhandanasya sameekshanam.** BHU. Dr Chandra Mauli Dwivedi, Department of Sahitya, Banaras Hindu University, Varanasi.

11. Mishra, Ganesh. **Karkadhikariya Mahabhashyasya paryalochanam.** BHU. Dr Ramesh Chandra Panda, Department of Vyakaran, Banaras Hindu University, Varanasi.

12. Mishra, Sudhanshu Shekhar. **Social aspects in Ayurveda as described in Ayurvedic classics.** BHU. Dr L D Dwivedi, Department of Ayurveda Samhita, Banaras Hindu University, Varanasi.

13. Pandey, Meenakshi. **Bhartrihari evam Dhanadaraj ke shatakajaye ka tulanatmak evam sameekshatmak adhyayan.** BHU. Dr R P Dwivedi, Department of Sanskrit, Banaras Hindu University, Varanasi.

14. Pandey, Radheyshyam. **Vishnudharmottarpurane jyotishasya sameekshatmakadhyayanam.** BHU. Dr Shrinivas Tiwari, Department of Jyotish, Banaras Hindu University, Varanasi.

15. Pandey, Raj Narayan. **Vedant jyotishasya sameekshan.** BHU. Dr Ram Chandra Pandey, Department of Jyotish, Banaras Hindu University, Varanasi.

16. Pandey, Shashi Kant. **Virodaya kavya ka sameekshatmak adhyayan.** BHU. Dr Kamlesh Kumar Jain, Faculty of Sanskrit Vidya Dharam Vigyan, Banaras Hindu University, Varanasi.

17. Pandey, Sunil Kumar. **Acharakarsya sameekshatmakam sampadanam.** BHU. Dr N R Shrinivasan, Department of Dharmashastra and Mimamsa, Banaras Hindu University, Varanasi.

18. Pathak, Digvijay Nath. **Jyotish drishtya vyadhi nirupanam.** BHU. Dr Ram Chandra Pandey, Department of Jyotish, Banaras Hindu University, Varanasi.

19. Prasad, Jay Prakash. **Madhyandin Samhita ke darshnik mantron ka samalochanatmak adhyayan.** BHU. Dr U P Singh, Department of Statistics, Banaras Hindu University, Varanasi.

20. Ratate, Suman. **Shatshloki : Ek vivechan.** BHU. Dr S L Jain, Department of Sanskrit, Banaras Hindu University, Varanasi.

21. Rohit Kumar. **Sadaguru Kabir evam Shankracharya ke Brahamvad ka sameekshatmak adhyayan.** BHU. Dr Krishankant Sharma, Department of Vedic Darshan, Banaras Hindu University, Varanasi.

22. Saisuta, P Nopadol. **A critical study of the second hymns of the Rigveda Samhita.** BHU. Prof V K Verma, Department of Sanskrit, Banaras Hindu University, Varanasi.

23. Shailendradhari. **Samhitadhikarasya paryaylochnam.** BHU. Dr Chandrabhanu Sharma Bhardwaj, Department of Vyakaran, Banaras Hindu University, Varanasi.

24. Shukla, Mukesh. **Jyotish shastra drishtya paryavaran vivechanam.** BHU. Dr Ramchandra Pandey, Department of Jyotish, Banaras Hindu University, Varanasi.

25. Singh, Neelam. ***Rigveda mein Ashwin Devata : Ek samalochanatmak adhyayan.*** BHU. Dr S L Jain, Department of Sanskrit, Banaras Hindu University, Varanasi.

26. Singh, Sangita. **Mahakavivadibhsinghsurikrit Kshtrachuramani : Ek adhyayan.** BHU. Dr Kamlesh Kumar Jain, Department of Jain Bauddh Darshan, Banaras Hindu University, Varanasi.

27 Tiwari, Shrikant. **Istranatdwitvyakaransiddhantkaumudhostulanatmakamparisheelanam.** BHU. Dr Chandrabhanu Sharma Bhardwaj, Department of Vyakaran, Banaras Hindu University, Varanasi.

Hindi

1. Agrawal, Meenu. **Sagun bhakti andolan : Surdas aur unki jeevan priyata.** BHU. Dr Ram Kali Saraf, Department of Hindi, Banaras Hindu University, Varanasi.

2. Agrawal, Sarita. **Hindi kee sahityik vidhayon ka prarambh: Ek alochanatmak adhyayan.** BHU. Dr Asha Pant, Department of Hindi, Banaras Hindu University, Varanasi.

3. Ajay Kumar. **Bharat kee sanskriti aur Goswami Tulsidas.** BHU. Dr Mangala Prasad, Department of Hindi, Banaras Hindu University, Varanasi.

4. Chaubey, Rajnath. **Amar Kant ke kahani sambandhi prayog.** BHU. Dr Ashok Singh, Department of Hindi, Banaras Hindu University, Varanasi.

5. Chaudhary, Manjula. **Hindi kee asangat natak parampara aur Mudra Rakshas ke natak.** BHU. Dr Narvadeshwar Rai, *Department of Hindi, Banaras Hindu University, Varanasi.*

6. Dwivedi, Manoj Kumar. **Bharatiya sadhana mein Padmavat ka sthan.** BHU. Dr Radheshyam Dubey, Department of Hindi, Banaras Hindu University, Varanasi.

7. Gautam, Abha. **Manas kee vaicharika shrinkhala ke vividh ayam.** BHU. Dr Ibha Gupta, Department of Hindi, Banaras Hindu University, Varanasi.

8. Mishra, Ashok Kumar. **Ramachandra Shukla evam Parshuram Chaturvedi ke nibandhon ka tulanatmak adhyayan.** BHU. Dr Vashistha Narayan Tripathi, Department of Hindi, Banaras Hindu University, Varanasi.

9. Mishra, Vijay Shankar. **Hindi gadya ke vikas mein Pandit Shivpujan Sahay ka yogdan.** BHU. Dr Nirmal Kumari Varsneya, Department of Hindi, Banaras Hindu University, Varanasi.

10. Mishra, Vinod Kumar. **Rashtriya andolan ke pariprekshya mein Prasad ke aitihasik natak.** BHU. Dr A Pradhan, Department of Hindi, Banaras Hindu University, Varanasi.

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Tamil

1. Jayakrishnan, P. **Science teaching and learning through Tamil medium in Kerala high schools : An evaluation.** Kerala. Dr L Gloria Sundramathy, Prof, Department of Tamil, University of Kerala, Kariavattom.

History

1. Mathura Prasad. **Vindhya Pradesh mein krishi, 1946-1956.** H S Gour. Dr D B Trivedi, Department of History, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

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THESES OF THE MONTH

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SOCIAL SCIENCES

Library & Information Science

1. Goswami, Prakriti Ranjan. **Statistical information system in India : A proposed model.** Delhi.

2. Manikya Rao, Muddamalle. **Natural language versus controlled vocabulary in information retrieval : A case study in soil mechanics.** Poona. Dr S G Mahajan, 27, Swastishri Society, Near Maharashtra Bank, Ganeshnagar, Pune.

3. Pathak, Lalit P. **Sociological concepts and their representation in information retrieval tools : A comparative study of terminology.** NEHU. Dr J C Binwal, Deparmtent of Library and Information Science, North Eastern Hill University, Shillong.

Psychology

1. Misra, Nachiketa. **A study of unethical behaviour in organizational context.** Delhi.

2. Sharma, Richa. **Exploring the issues of worker management relations in organisational context.** Delhi.

Sociology

1. Chakravarty, Shubhamanyu. **The changing medical behaviour of the tribal workers of tea industry : A study of medical sociology in some tea plantations of the Terai region of West Bengal.** NBU.

2. Katare, Prakash Marotrao. ***Tamasha, sangitbari artists,* their problems and public attitude.** Marathwada. Dr D D Kachole, Head, Department of Sociology, Deogiri College, Aurangabad.

3. Khan, Shakeel Ahmad. **Women entrepreneurs and their social milieu : A sociological study of women entrepreneurs of Delhi.** JNU. Dr J S Gandhi, Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

4. Naik, Rukmini Poma. **Sociological study of Banjara community through ethnomethodological approach.** Marathwada. Dr (Mrs) S V Kaldate, Prof (Retd), Department of Sociology, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

Social Anthropology

1. Jasuratnam, Devarapalli. **Cultural ecology of Ayodhya Lanka : A river island community.** Andhra.

2. Vishnupant Bandewar, Sunita. **Interpersonal networks and communication alliance : An exploration.** Poona. Dr K S Nair, Department of Anthropology, University of Poona, Pune.

Political Science

1. Ansari, Md Nafees Ahmad. **A study of judical review of administrative actions in India.** AMU. Prof M Murtaza Khan.

2. Bandyopadhyay, Anjana. **Police administration in West Bengal : The problem of colonical legacy.** Burdwan. Prof S K Roy, Department of Political Science, University of Burdwan, Burdwan.

3. Ghosh, Basanta Kumar. **Emerging pattern of politcal power structure in Rural West Bengal : A case study of Burdwan, 1972-1985.** Burdwan. A K Mukherjee, Department of Political Science, University of Burdwan, Burdwan.

4. Kakar, Devendar. **Strategy of the South in the North-South dialogue.** Delhi.

Economics

1. Bant Singh. **An economic analysis of output growth and demand for labour in Panjab agriculture.** Punjabi. Dr Rajbans Kaur, Department of Economics, Punjabi University, Patiala and Dr H S Bal, Farm Economics and Sociology, Punjab Agriculture University, Ludhiana.

2. Deole, Suchita. ***Madhya Pradesh mein lok udyogon kae karya pranali tatha mulya neeti.*** Devi Ahilya. Dr R P Gupta, 39, Anand Nagar, Bhavarkuan, Indore.

3. Dutta, Rajeshree Arun. **Some aspects of regional variations in agricultural development in Gujarat.** Patel. Dr M T Pathak.

4. Gupta, Anil. **Determinants of consumption expenditure in India : A disaggregative analysis.** Meerut. Prof V N Pandit, Department of Economics, Delhi School of Economics, University of Delhi, Delhi and Dr O K Saxena, Head (Retd), Department of Economics, NAS College, Meerut.

5. Gupta, Saroj. **Changing trends of India's foreign trade with Eropean countries from 1984-1992.** Devi Ahilya. Dr D R Devale, 36, Martand Chowk, Indore.

6. Khatik, Gopal Lal. **A study on training needs of tribal dairy farmers in Rajasthan.** NDRI.

7. Mallick, Harigopal. **India's trade and economic relations with South Asian countries, 1980-89.** NBU.

8. Marudachalam, V M. **Spatial distribution of employment and urban residential allocation in Madras Metropolitan Area.** Anna. Dr A N Sachithanandan, Dean, Department of Architecture and Planning, School of Architecture and Planning, Anna University, Madras.

9. Pandey, Sanjay. ***Dakshin Pashchim Madhya Pradesh ke adivasiyon ka samajik arthik shoshan.*** Devi Ahilya. Dr V D Nagar, 'Nath Kripa', Near Nath Mandir, South Tukoganj, Indore.

10. Promila. **Gender analysis in dairy and crop production in Kangra District, Himachal Pradesh.** NDRI.

11. Sananse, Suryabhan Laxman. **Some statistical aspects of crop insurance scheme.** Marathwada. Dr S G Prabhu-Ajgaonkar, *Prof and Head, Department of Statistics, Dr Babasaheb Ambedkar* Marathwada University, Aurangabad.

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15. Sinha, Sunil Kumar. **Production and exchange relations in a transitional economy : A study of village economy in Bihar.** JNU. Dr Jayati Ghosh, Centre for Economic Studies and Planning, Jawaharlal Nehru University, New Delhi.

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17. Sukhpal Singh. **Agro industrialisation in Panjab : The case of food processing industries.** Bangalore. Dr Vinod Vyasulu, 451, 38 'A' Cross, 9th Main, 5th Block, Jayanagar, Bangalore.

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19. Venkatasubramanian, V. **Multidimensional analysis of crossbreeding programme in Tamil Nadu.** NDRI.

20. Vinay Kumar. **Inter-state variations in India's industrial development.** Kurukshetra.

Law

1. Badruddin. **Role and position of directors under Company Law : A comparative study of India, Great Britain and United States of America.** Dayanand, Rohtak.

2. Chansoria, Divya. **A critical study of the Lokayuktas in India with special reference to Madhya Pradesh.** Durgavati. Dr J K Pandey, Department of Law, Rani Durgavati Vishwavidyalaya, Jabalpur.

3. Dhanda, Amita. **A critical appraisal of the laws relating to the mentally ill.** Delhi.

4. Nagore, Arjun Prasad. **Biological diversity and International Environmental Law.** JNU. Prof Rahmatullah Khan, Centre for Studies in Diplomacy, International Law and Economics, Jawaharlal Nehru University, New Delhi.

5. Sapra, Kanwal. **Freedom of Press : A critical and comparative study.** Nagpur. Dr A Laxminath, Prof and Principal, College of Law, Andhra University, Visakhapatnam.

Public Administration

1. Munni Devi. **Administration of Co-operative credit in Haryana.** Kurukshetra.

Education

1. Bhokta, Naresh Prasad. **Vernacular education in certain areas of Northern India, viz, Uttar Pradesh and Bihar during the nineteenth century.** Delhi.

2. Chandra, Amita. **National identity in history texts : A critical study of the history textbooks of lower secondary classes.** Delhi.

3. Clements, Edith Nalini. **The contribution of Christian Missions to the development of education in Madhya pradesh from 1956 to 1985.** Durgavati. Dr N N Shrivastava, Prof, State Institute of Science Education, Jabalpur.

4. Darshan Singh. **Effectiveness of traditional method and psycho-social method of Paulo Freire for imparting social, economic and political awareness among male illiterate farm labourers of Panjab.** Punjabi. Dr Amrit Kaur, Prof, Department of Education, Punjabi University, Patiala.

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11. Nessa, Syeda Malihatun. **A study of the factors affecting the academic achievement of Bangladeshi primary school children of Dhaka City.** Baroda.

12. Om Parkash. **To study the effectiveness of value analysis model in developing value analysis competencies among B Ed trainees and school students.** Dayanand, Rohtak.

13. Patel, Maltiben Chimanlal. **A study of the effect of a creative teaching model in Science on the achievement and attitude of students of class VII.** Patel. Dr C K Patel, Principal, Anand Education College, Anand.

14. Pawar, Kisan Bandu. **Nashik Jilhayateel madhyamik shikshanchya.** Poona. Dr M A Dalvi, Gulistan -2, Shankar Shet Road, Pune.

15. Pichad, Nalini Bharat. **Pashchim va Uttar Maharashtrateel Mahadevkoli samajanchya arthik va samajik paristhiticha tyanchya shaikshnik vikasavar hona ya parinamanchya : Chikitsak abhyas.** Poona. Dr N L Jadhav, Principal, Pravara Gramin Education Mahavidyalaya, Pravaranagar, District Ahmednagar.

16. Raut, Subrata Rani. **A study of organisational effectiveness in relation to leadership behaviour, role performance and conflict management strategies of the principals and teachers' work satisfaction.** Kurukshetra.

17. Rayate, Shantaram Ranu. **A study of achievement in Mathematics of school students of Nasik District.** Poona. Dr V Z Sali, 44/698 Lokmanyanagar, Pune.

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19. Sarbjit Kaur. **Value-dimensions of post-graduate students in relation to levels of aspiration and intelligence.** Punjabi. Dr R P Goyal, Department of Education, Punjabi University, Patiala.

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Commerce

1. Basu, Kalipada. **Trends of developments in certain selected industries in West Bengal : A critical study of the contributory factors, 1950-51 to 1985-86.** Burdwan. Dr B Ghosh, Department of Commerce, University of Burdwan, Burdwan.

2. Beg, Masroor Ahmad. **Intra-regional trade among SAARC countries.** Delhi.

3. Bodla, Bhag Singh. **Agricultural indebtedness with special reference to unorganised sources of finance.** Kurukshetra.

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13. Thakur, Ashish Kumar. **Madhya Pradesh mein tilhan ka utpadan evam vipnan : Madhya Pradesh Tilhan Utpadak Sangh ke vishesh sandarbh mein.** Durgavati. Dr S N Singh, G S *College of Commerce and Economics, Jabalpur.*

Home Science

1. Abinash Kaur. **Health resource management : A study of farm women in district Kangra, Himachal Pradesh.** PAU.

2. Deshpande, Suneeta Arvind. **Studies on amylase rich foods, ARF.** Baroda.

3. Gupta, Sadhana Laxminarayan. **Efficacy of solar-cookar for better home-management.** Nagpur. Dr (Mrs) Asha B Nimkar, Department of Home Science, Nagpur University, Nagpur.

4. Manjit Kaur. **Impact of modernisation of the living conditions of rural and urban inhabitants.** PAU.

5. Patil, Asha Shivraj. **Identifying training needs of farm women in Home Science education in Gujarat State.** Baroda.

6 Savita **Inter-regional variations in farm women's work pattern in Panjab State.** PAU.

7. Siddiqui, Sarvat. **Bilaspur Jile kee uchchttar madhyamik shalayon ke chhatra chhatraon kee vyavsayik ruchiyon per buddhi tatha prerna ke prabhav ka adhyayan.** Ghasidas. Dr (Smt) Sudha Jain, D/8, Vinoba Nagar, Bilaspur.

8. Vaidya, Meera. **A study of essential systemic hypertension with special reference to nutritional status and dietary habits.** Durgavati. Dr G S Mehta, Reader, Department of Medicine, Govt Medical College and Hospital, Jabalpur and Dr (Smt) K Hasija, Department of Bio-Chemistry, Govt Medical College and Hospital, Jabalpur.

Management

1. Ambarish Kumar, K. **Household decision making : A study of durable buying.** Kurukshetra.

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Controller, Entrance Examination.

Gandhara : RN : BIT-002 : 95-96

CENTRAL INSTITUTE OF FISHERIES EDUCATION

(Deemed University)

(I.C.A.R.)

VERSOVA, BOMBAY-400 061

ADMISSION TO PH.D. PROGRAMME (1995-96 SESSION)

An all India Competitive Written Examination for Admission to Ph.D. Programmes for the Academic Session 1995-96 commencing from 01.09.1995 will be held on 16.07.1995 at the C.I.F.E., Bombay.

Sr. No.	*Names of Discipline*	*No. of Seats*		
		Gen.	*SC/ST*	*Total*
1.	Inland Aquaculture	2	1	3
2.	Mariculture	2	1	3
	Total	4	2	6

Eligibility Qualifications : For Fisheries Resources Management, Inland Aquaculture and Mariculture : M.Sc. FM/IFAM/Aquaculture/Mariculture/Marine Biology/Zoology with specialisation in Fisheries Science OR M.F.Sc. OR D.F.Sc. with 5 years research experience as evident by publication.

For Fisheries Statistics : M.Sc. Statistics OR Mathematics/M.F.Sc./M.Sc.FM/IFAM/Agricultural Statistics/Fisheries Statistics.

Candidates for all the disciplines must possess 60% marks or OGPA of 7.5/10.00 or equivalent of first class in case of 5,4 and 3 point scale. (For SC/ST candidates 55% marks or OGPA of 7.0/10.00 or Passing grade for 5,4 and 3 point scale.

Minimum residential requirement for Ph.D. programmes is 3 years (6 semesters) with one year course work in the first year (2 semesters). Besides this regular semester programmes, candidates who have not been exposed to Fisheries subjects in their Master degree programme shall have to take prescribed remedial courses on fisheries as per the recommendations of the Advisory Committee.

Age Limit : The minimum age limit for admission shall be 21 years as on 31st December 1994. No relaxation in age limit is allowed.

Prescribed Application Form alongwith information Bulletin for the Entrance Examination and Admission for the Ph.D. Programmes can be obtained from the Senior Administrative Officer/ REGISTRAR, CIFE, Seven Bungalows, Versova, Bombay-400 061. Request for information Bulletin and Application Form to be sent by post may be made upto 31st May 1995. But Application Form and information Bulletin may be obtained in person at the CIFE till 10th June 1995. When given in person at the CIFE, the charge for the same will be Rs. 25/- in the shape of a Crossed Demand Draft but if it is to be sent by post, a crossed Demand Draft of Rs. 35/- will be required, drawn in favour of the Senior Administrative Officer, CIFE, Bombay-400 061. Request for this through cheque/postal order/VPP will not be entertained. The Admit Card for the entrance examination to the eligible candidates will be sent by post. Any postal delay in delivery of Admit Card will not be the responsibility of the CIFE. The last date of receipt of filled in application form is **10th June 1995**.

CLASSIFIED ADVERTISEMENTS

NORTH MAHARASHTRA UNIVERSITY

JALGAON
POST BOX. NO. 80,
JALGAON 425 001 (M.S.)

ADVERTISEMENT No. 2/1995

Applications are invited for the following teaching posts:

Abbreviations used:- **P = Professor, R = Reader, L = Lecturer**

(A) (1) Physical Sciences- 1P(Isolated)-Electronics/Material Science/Energy Studies, 2L (1 SC + 1 NT) - Electronics/Energy Studies, **(2) Chemical Sciences-** 1P(Isolated), 2L(1 NT+1 OBC/OPEN) - Polymer Chemistry/Pesticides and Agrochemicals, **(3) Chemical Technology-** 1P(Isolated), 2L(OBC/OPEN)- Chemical Engineering/Plastics/Paints, 1R(SC)-Chemical Engineering/Oil, Fats & Waxes/Paints, **(4) Life Sciences-** 1P(Isolated)-Biotechnology/Microbiology, 1R(OBC/OPEN)-Biotechnology/Biochemistry, 1L(ST)-Biotechnology/Microbiology/Biochemistry, **(5) Mathematical Sciences** - 1P(Isolated), 1R(NT), 1L(SC)-Mathematics, 1R(OBC/OPEN)-Statistics, **(6) Computer Science-** 1P(Isolated), 2R(1ST+1 OBC/OPEN), 1L(SC)-Computer Science/Computer Applications, **(7) Management Studies** - 1P(Isolated, 2R(1 SC+1 OBC/*OPEN), 3L(2 ST + 1 OBC+1 OPEN)*, **(8) Philosophy** - 1R(Isolated).

(B) Bank of Baroda Professor of Banking- Contractual Post, fixed salary, age *upto 65 years.*

Details regarding QUALIFICATIONS, EXPERIENCE, AGE, RESERVATIONS FOR WOMEN, HOW TO APPLY *etc. shall be supplied on a written request* mentioning the name of the post to be applied for alongwith a D.D. of Rs. 10/- in favour of North Maharashtra University, Jalgaon or by Cash Payment in the University Office during office hours on or before **13th May, 1995**.

The last date of submitting duly completed form in 10 copies alongwith D.D. of **Rs. 25/- is 20th May, 1995.**

Date :- 11/4/1995 **REGISTRAR**

UNIVERSITY OF HYDERABAD

(A Central University established in 1974 by an Act of Parliament)

EMPLOYMENT NOTIFICATION
No: Rectt/3/95

The University of Hyderabad provides instructional and research facilities in all major branches of learning in Humanities, Social Sciences, Sciences, Creative Arts and Communication.

The University of Hyderabad invites applications in the prescribed form for the following positions:

1. **REGISTRAR : (1)**
2. **DIRECTOR - ACADEMIC STAFF COLLEGE : (1)**
3. **MEDICAL OFFICER : (1) Reserved for ST**
4. **ASST. LIBRARIAN : (1) Reserved for ST**

Scale of pay and gross emoluments at the minimum of the scales are as follows:

Sl. No.	Scale of Pay	Gross monthly emoluments at the minimum
1 & 2	Rs. 4500-150-5700-200-7300	Rs. 10,075.00
3 & 4	Rs. 2200-075-2800-100-4000	Rs. 5,600.00

Post of Medical Officer carries NPA of Rs 600/- p.m.

The prescribed application form and particulars of qualifications, experience etc., can be had either in person from the **Personnel Section-I, Administration Building, University Campus in Gachibowli, Hyderabad - 500 046** by paying **Rs** 10/- for one set of application form or by post, by sending a crossed demand draft for Rs. 15/- drawn in favour of the **Finance Officer, University of Hyderabad on State Bank of India, HUC Branch, (Code No. 5916) or Andhra Bank, Nampally Station Road Branch, (Code No. 0378) payable at Hyderabad** along with requisition for application to the **Assistant Registrar (Personnel-I), University of Hyderabad, P.O. Central University, Hyderabad - 500 046, on or before 25th May, 1995**

The last date for receipt of applications duly filled in is **31st May, 1995.**

P. Muralikrishna
REGISTRAR

DATE: 20th April, 95

INDIAN INSTITUTE OF GEOMAGNETISM

DR. NANABHAI MOOS MARG,
COLABA
BOMBAY 400 005

(Advt. 2/95)

(An autonomous Institute under the Department of Science and Technology, Government of India)

Indian Institute of Geomagnetism is a premier Institute engaged in research activities *in all aspects of Geomagnetism.* The Institute invites applications from the qualified candidates to fill up following temporary posts in a DST funded project on 'Magnetospheric Electric Fields and Their Effect on Global Electric Circuit'. The initial appointments will be made for one year, but could be extended maximum upto 3 years. The criteria of extension beyond one year would be the performance and the motivation. Preference will be given to Scheduled Caste and Scheduled Tribe candidates.

(1) **COMPUTER PROGRAMMER** : ONE POST

Scale of Pay : Rs. 2200-75-2800-EB-100-4000

Qualifications:

(A) **Essential:** First or high second class M.Sc. in Physics, Geophysics, Pure and Applied Mathematics, Electronics or Computer Science, with 4 year experience of working in the relevant field in a reputed research laboratory/Institution/University etc

(B) **Desirable** : A Ph.D. degree, preferably in Plasma Physics.

(C) **Job requirements** : The job requirement would be to work on MHD computer simulation codes dealing with Solar Wind-Magnetosphere Interactions.

(2) RESEARCH ASSOCIATE : ONE POST

Scale of Pay: Consolidated amount to be fixed in one of the 4 slabs

(i) Rs. 2800-100-3300

(ii) Rs. 3300-100-3800

(iii) Rs. 3750-125-4375

(iv) Rs. 4325-125-4700-150-5000

Qualification : Ph.D. in Physics, Space Physics or Plasma Physics.

Job **requirements** : The selected candidate will help in carrying out theoretical problems related to the project and help in doing the numerical computations.

NOTE : In case no suitable candidates is found for the post (1), applicants may be considered for the post (2).

Applications on plain paper along with the bio-data should be sent **within two weeks** from the date of publication of the advertisement to the Administrative Officer, Indian Institute of Geomagnetism, Colaba, Bombay 400 005. The biodata must contain the following information (1) Name (2) Full Address (3) Date of Birth (4) Qualifications (Examination passed, Year, Subjects and Class/Grade obtained), (5) A brief synopsis of the research work done (6) At least two References and (7) A list of publications.

SHIVAJI UNIVERSITY, KOLHAPUR

ADVERTISEMENT

Applications are invited for the post of SRF in CSIR funded project entitled "NEW METHODS FOR EXTRACTION CHROMATOGRAPHIC SEPARATION OF SOME ELEMENTS WITH MACROCYCLIC/POLYCYCLIC-POLYETHERS" under the supervision of Dr. B.S. Mohite. The tenure of the project would be about one year.

ALL INDIA INSTITUTE OF SPEECH AND HEARING: MYSORE

ADMISSION NOTICE

Applications in the prescribed form are invited for admission to courses in Speech and Hearing. Forms with details can be obtained on payment of Rs. 12/- (Rs. 7/- for SC/ST) in cash or MO/IPO drawn in favour of the Director, AIISH, Mysore along with a self-addressed and stamped (Rs. 2/- envelope (22 x 10 cms).

		B.Sc.	M.Sc.	AIISH Fellowships
Minimum qualification		P.U.C. or equivalent with PCM/PCB/PCMB as optionals with atleast 50% marks in optionals (45% for SC/ST)	B.Sc. (Speech & Hearing) or equivalent	M.Sc. (Speech & Hearing) with atleast 60% marks
Total Seats		33	23	4
Reserved:	SC	4	3	
	ST	2	1	
Foreign		3	-	
Inservice		-	3	

Completed applications received upto 4 PM, 3rd July 1995 for B.Sc., and 31st July 1995 for M.Sc., and Fellowships.

Director

THE TECHNOLOGICAL INSTITUTE OF TEXTILE & SCIENCES

P.O. BIRLA COLONY, BHIWANI-125021
(HARYANA)

CORRIGENDUM

In supersession of our Advertisement for Staff recruitment which appeared in the University News dated 3 April'95 (page 44), the qualifications for the following posts may be read as under :-

Lecturer (Mathematics) :

M.Sc (Mathematics/Mathematical Statistics) followed by Ph.D in Math/Statistics. Candidates with working knowledge of Computer will be preferred.

Lecturer (Management):

Ph.D or Fellows of IIMS, ICA, ICWA or Master's Degree with 2 years' professional experience.

The qualifications for other posts and other details will remain unaltered.

DIRECTOR

years research experience with research publication(s). **Age Limit** : 32 years & relaxable by five years for Reserved Category. **Stipend** : As per CSIR rules.

Interested candidates should submit their applications on plain paper giving details of qualifications and bio-data to **Dr. B.S. Mohite**, Department of Chemistry, Shivaji University, Kolhapur-416 004, **within fifteen days** from the date of this advertisement.

Dr. B.P. Sabale

Date: 15 April, 1995 REGISTRAR

BHARATA MATA COLLEGE, THRIKKAKARA

Wanted

Lecturers for the permanent/temporary vacancies likely to arise in Community (Syrian Catholic)/Open Merit in the following subjects:

1. English
2. Economics
3. Zoology
4. Chemistry

All vacancies are subject to the approval of the University/Government.

The Age Limit and Qualification as prescribed by the UGC/Govt. of Kerala/Mahatma Gandhi University, Kottayam. Application Forms can be had from the college office on payment of Rs. 50/- (M.O. for Rs. 60/- if by post). Apply **within 30 days** from the date of this Notification to the Principal, Bharata Mata College, B.M.C. P.O., Thrikkakara, Cochin - 682 021.

PRINCIPAL

UNIVERSITY OF PUNE

Applications are invited in prescribed form for:

(1) Executive Director : International Centre

Last date for submission of application : 15th May, 1995

Duration of the appointment : Three Years.

Qualification : Teacher in the University Department or College in the grade of Professor or Readers having general qualifications prescribed for the University Professor. Retired teacher with age upto 65 years, will also be considered for the post.

Pay Scale : Rs. 4500-150-5700-200-7300, plus Allowances (For retired teacher - consolidated salary of Rs. 6,000/- per month).

The Director will be entitled to accommodation on campus and to the benefits and privileges generally available to non-vacational academic-cum-administrative post.

(2) Professor : For the Chhatrapati Shivaji Chair in Policy Studies.

Last date for submitting the form : 15th June, 1995

Duration : 18-24 Months

Age : 45 to 65 years on 1.9.1995.

Eligibility : **(a)** Indian Citizen, **(b)** Government/Non-Government Officer in National Security Planning, Peace Making and Public Affairs, Armed Forces Policy Maker above Brigadier or equivalent rank with N.D.C. Training, Diplomats, Negotiator, Legal Expert, Leader in Humanitarian Efforts, Business Person, **(c)** Scholar/Researcher as Senior Professor in University/Policy Analyst in Research Organization/Consultant/Writer, **(d)** Should possess proven record of excellence in respective field and Nationally/Internationally Recognized work/Contribution or publications.

Theme of Research : Changing nature of conflict and the role of Armed Forces in the 21st Century (Indo-centric framework of Analysis) use of force or violence and assessing the need for restructuring the existing organizations.

Salary : Rs. 7300/- p.m. (Maximum of Professor's grade) plus allowances. Sabbatical scholar shall be paid w.r.t. present emoluments. Suitable accommodation will also be provided on the campus.

Applications can be had from the Registrar on payment of Rs. 100/- in person or Rs. 110/- by DD/IPO by post.

Advt. No.: 22 Subhaschandra Bhosale

Date : 17/4/95 **Registrar**

UNIVERSITY OF HYDERABAD

(Central University established under an Act of Parliament)
P.O. Central University, Hyderabad - 500 046.

ADMISSION ANNOUNCEMENT 1995-96

The University will hold entrance examinations from 26th June to *30th June 1995 for admission to the following courses during* 1995-96.

1) SCHOOL OF HUMANITIES: M.A., M.Phil. & Ph.D. in English, Philosophy, Hindi, Telugu, Urdu and Applied Linguistics; M.A. in Functional Hindi (Translation); M.Phil and Ph.D. in Comparative Literature, P.G. Certificate/Diploma in Chinese/Japanese (part-time evening courses), and Advanced Diploma in Telugu (for non-Telugu speaking persons).

2) SCHOOL OF SOCIAL SCIENCES: M.A., M.Phil & Ph.D. in Economics, History, Political Science, Sociology and Anthropology; M.Phil. and Ph.D. in Regional Studies.

3) SCHOOL OF CHEMISTRY: M.Sc., M.Phil. (Chemistry/Chemical Education) & Ph.D.

4) SCHOOL OF LIFE SCIENCES: M.Sc., M.Phil., Ph.D. in Biochemistry, Plant Sciences, Animal Sciences.

5) SCHOOL OF MATHEMATICS & COMPUTER/INFORMATION SCIENCES: a) Mathematics and Statistics: M.Sc., M Phil. & Ph.D. in Mathematics, Applied Mathematics, Statistics Operations Research **b) Computer/Information Sciences:** M.C.A., M.Tech. (Computer Science), M Tech. (Artificial Intelligence) & Ph.D.

6) SCHOOL OF PHYSICS: M.Sc. (Physics), M.Sc (Electronics). M.Phil. (Physics, Materials Science and Modern Optics/Laser Physics) & Ph.D.

7) SAROJINI NAIDU SCHOOL OF PERFORMING ARTS, FINE ARTS AND COMMUNICATION: M.P.A. (Dance), M.P.A. (Theatre Arts), M.F.A. (Painting), M.A. in Communication, P.G. Diploma in Acting (Part-time evening course) & Ph.D. in Folk Culture Studies.

ENTRANCE EXAMINATIONS: Admissions are made on All India basis in order of merit taking into consideration the past academic record and performance of the candidates at written/oral test as prescribed in the Prospectus for 1995-96. The written examinations for all the courses will be held at Bangalore, Bhubaneswar, Cochin, Delhi, Hyderabad, Madras, Madurai, Pune, Tirupati, Vijayawada and Waltair. The University reserves the right to cancel any of these centres without assigning any reasons. The oral tests for M.Tech, M.Phil & Ph.D. programmes and for P.G. Courses offered by the S.N. School are scheduled to be held between 17th and 20th July '95 at Hyderabad. Candidates will have to appear for these examinations (both written & oral) at their own expense

RESERVATION OF SEATS: In each course, 15% and 7.5% of the seats are reserved for SC and ST candidates respectively with a provision for interchangeability wherever necessary. 3% of the seats are reserved for physically handicapped candidates. Relaxation in the prescribed percentage of marks is also provided.

For admission of foreign students, nominated candidates from the *North Eastern states and some Union territories and weightage* for excellence in sports and cultural activities at state/national level a reference may be made to chapter 3 of the Prospectus.

ELIGIBILITY: Detailed information regarding minimum qualifications and other requirements for various courses is given in the Prospectus. Candidates whose results of the qualifying degree examination are awaited and also those who are due to appear for the final examination of the qualifying degree by the last date for completion of admission by the main-listed candidates (24.07.95 for P.G. courses and 02.08.95 for M.Phil. M.Tech and Ph.D) are also eligible to apply. They must, however, submit the result of the final examination not later than 31st August, 1995 failing which provisional admission, if granted, will stand cancelled automatically.

HOW TO APPLY: Prospectus for 1995-96 containing detailed instructions, eligibility criteria for admission to each course/programme and application forms can be obtained: **IN PERSON:** from 20-4-1995 onwards either from the Academic Section, Administration Building in the University Campus, Gachibowli, Hyderabad-500 046 or from "The Golden Threshold" premises at Nampally Station Road, Hyderabad - 500 001, against cash payment of Rs. 60/- for the first set of one application form and Prospectus and Rs. 20/- for each additional application form. **BY POST :** from the Asst. Registrar (Acad.), University of Hyderabad, Central University P.O., Hyderabad - 500 046, by sending (a) requisition, (b) one self addressed slip, (c) a crossed demand draft for Rs. 70/- drawn in favour of the Registrar, University of Hyderabad, on State Bank of India, Hyderabad, Central University Branch, Hyderabad (Code 5916) or on Andhra Bank, *Nampally Branch, Hyderabad (Code 378) for the first set of one* application form and Prospectus and Rs. 20/- for each additional application form.

NOTE: **A separate application is required for each course. However, for the following courses one application for each set of courses as mentioned below is sufficient: I)** M.Sc. Mathematics (Applied Mathematics/Mathematics, Statistics-O.R.); **II)** M.Tech (Computer Science, Artificial Intelligence); **III)** M.Phil. Mathematics (Applied Mathematics/Mathematics, Statistics - O.R.); **IV)** M Phil in Physics, Materials Science, Modern Optics/Laser Physics); **V)** M.Phil. in Chemistry/Chemical Education; **VI)** Ph.D. in Maths (Mathematics, Applied Mathematics, Statistics - OR).

LAST DATE for receiving requisition for issue of application forms by post :	**12.05.95 (Friday)**
LAST DATE for receiving completed application forms :	**19.05.95 (Friday)**

The University will not be responsible for any postal delay. Candidates are therefore advised to apply well in time.

Dated: April 7, 1995 **Registrar**

THE EMBASSY OF ARGENTINA AWARD

FOURTH ANNUAL ESSAY COMPETITION, 1995

Sponsored by

Embassy of Argentina
B-8/9 Vasant Vihar
New Delhi-110057

1. The Embassy of the Argentine Republic is pleased to announce the holding of its FOURTH ANNUAL ESSAY COMPETITION, 1995 with a view to encouraging studies and research on aspects of the Argentine Republic as well as different facets of relationship between India and Argentina.
2. The Competition is open to undergraduate and graduate students of universities and institutions of higher learning in India who have not been awarded a prize in previous essay competitions.
3. Essays can be on any one specific aspect of Argentina or Argentina-India relations in the fields of philosophy, culture, literature, foreign policy, economy, science and technology.
4. The essays should be original and should not have been published earlier. Style, presentation and innovative ideas will be given due consideration.
5. The essay should be in English language and should not exceed 25 pages. It should be typed in double space on A.4 size sheets (8,1/4x11,3/4 inches). It must be signed by the contributor, with name, age, year of study, name and full address of the institution where he/she is studying and residential address of the contributor. The essay should be certified by the Professor or Head of the Department/Institution to the effect that the contributor is a bonafide student. Contributions sent unsigned and/or without the certification of the Professor/Head of the Department/Institution will not be considered.
6. *The envelope should be superscribed as* "FOURTH ANNUAL ESSAY COMPETITION, 1995" and addressed to : The Ambassador of the Argentine Republic, B-8/9, Vasant Vihar, New Delhi-110057, so as to reach the Embassy not later than SEPTEMBER 30, 1995.
7. The contributions will be judged by a panel of distinguished professors/scholars. Their decision will be final. No correspondence will be entertained on the question of assessment of essays.
8. *Award winning and selected essays may be published by the Embassy for free circulation.* The copyright of all entries will rest with the Argentine Embassy in India.
9. The following prizes will be awarded :

   FIRST PRIZE: Rs. 14,000/-
   (Rs. Fourteen thousand)
   (A Citation)

   SECOND PRIZE: Rs. 9,000/-
   (Rs. Nine thousand)
   (A Citation)

   All other entries will receive a Certificate for participation.
10. Results will be announced on OCTOBER 30, 1995. Award Ceremony will take place in New Delhi in NOVEMBER 1995.

New Delhi, April 1995.

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